

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1007—Vol. XXIV.]

LONDON, SATURDAY, DECEMBER 9, 1854.

[PRICE 6d.]

R. JAMES CROFTS, MINING BROKER,
No. 1, PINCH LANE, CORNHILL, LONDON, TRANSACTS BUSINESS IN BUYING AND SELLING, for immediate cash.
DIVIDEND MINES, well selected, are the best of any known investments—paying from 15 to 30 per cent. per annum in dividends. The choice of NON-DIVIDEND MINES for speculation requires careful discrimination.
Mr. Crofts transacts every description of business connected with the STOCK CHANGE at the same rates of commission as charged by the brokers of that establishment.—BANKERS: The Commercial Bank of London.

R. JAMES LANE, No. 33, THREADNEEDLE STREET,
LONDON, continues to DEAL in all the LEADING MINES, and is desirous of PURCHASING Sortridge Consols, Hingston Down, Devon Great Consols, Bedford, Mollard, &c.

R. J. B. BRENCHLEY, 2, PINNER'S COURT, OLD BROAD STREET,
BUTTS AND SELLING MINING SHARES of every description, for the BEST PRICES.
Advantageous investments can now be effected in the leading Progressive Mines, prices far below their value, and of which investors should not hesitate, at once, to take notice. Parties wishing to know the current prices previous to investing, may rely upon any application meeting with immediate attention.

MR. W. LEMON OLIVER, STOCK AND SHAREBROKER,
23, THREADNEEDLE STREET
Business transacted in every description of British and Foreign Mines.

ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, No. 3, OLD BROAD STREET, LONDON.
MR. HENRY SIBLEY (late Mr. Peter Watson) will at all times give the best information; and also BUY and SELL SHARES on the usual commission.

MR. GEORGE SPATLEY TRANSACTS BUSINESS IN ALL BRITISH AND FOREIGN MINES.
No. 2, WINCHESTER BUILDINGS, LONDON.

MR. E. GOMPERS, MINING SHARE DEALER,
98, GRACECHURCH STREET, LONDON.

MR. MICHAEL WILLIAMS BAWDEN, MINE SHARE BROKER AND GENERAL ASSAY MASTER, LISKEARD.

MR. FRANCIS RIDGMAN, MINE SHAREBROKER,
TAVISTOCK, DEVON.

MR. NEWTON SAMUELSON, F.C.S., ASSAYER AND ANALYTICAL CHEMIST, 3, HACKIN'S HEY, LIVERPOOL.

MR. RICHARD MITCHELL'S MINING AND GENERAL COMMISSION AGENCY OFFICES.
Mines inspected, and information punctually furnished.

MR. W. H. BRUMBY, No. 1, BRIDGE STREET, BATH, will BUY Wheel Zion, Wheel Gill, West Polberro, Castle Dinas, Rosecan, and Great Wheel Alfred.—N.B. Persons offering shares must name the quantity and lowest price, or no notice can be taken of the offer.

MESSRS. HENWOOD AND CO., MINE AGENTS AND SURVEYORS, LEEDS, OFFER THEIR SERVICES to parties embarking in MINING, and are prepared to give advice on all the leading speculations of the day. Offices of the Pennine Consols, Copper, Zinc, and Lead Mining Company, &c. Telegraph-yard, Leeds.

MR. RICHARD HAWKE has instructions to SELL the following SHARES:—4 Wheel Mary Ann (Mushenol), £38; 3 Wheel Trevelyan, £34; 10 Wheel Trevelyan, £38 10s.; 2 Gossens, £13; 10 Trevelyan, £3 10s.; 10 Wheel Wrey, £4 11s. WANTED.—One South Caradon, £275; 100 Ludcott, 11s. Tavern Hill, Liskeard, Cornwall.

MR. TYACK, MINE BROKER, CAMBORNE, from his situation in the best mining district in the country, together with his daily opportunities of increased experience, is well adapted to GIVE ADVICE to CAPITALISTS disposed to invest in MINING; considering the present time, a good and favourable opportunity to invest. Mines inspected by the most experienced agents.

DIVIDEND MINES.—J. HOLLOW HAS SHARES FOR SALE, at prices to give 20 to 25 per cent. on the outlay. Also, SHARES in FIRST-CLASS PROGRESSIVE MINES.
J. Hollow, being practically connected with mining, OFFERS HIS ADVICE to parties desirous of investing.—Address, Lelant, Hayle, Cornwall.—Dec. 9, 1854.

MR. JOSEPH WM. OLIVER, No. 75, OLD BROAD STREET, LONDON, is a BUYER of the following SHARES:—
Sortridge Consols, Wheel Edward, Wheel Uny, North Frances, West Sortridge, East Kinsell, Wh. Kitty (St. Agnes), South Tamar, Bedford United, Wheel Wrey, Boringdon Consols, South Towy, Great Wheel Hugo, Trevelyan, Great Wh. Baddern, South Caradon, Hingston Down, Mary Ann, Alfred Consols, West Providence, Tamar Maria, Trevelyan, Great Wheel Alfred, Dylwyn, North Hingston, North Trevelyan, West Alfred, East Tamar, North Robert, Wheel Gill, South Bog, Mary Great Consols, North Surprise, Ludcott, East Frogoch, Linares, and will BUY or SELL any shares or securities for the usual commission.

MR. W. GOULD SHARP TRANSACTS BUSINESS in every description of BRITISH and FOREIGN MINING SHARES; particularly recommends the present time for investment of spare capital; and has FOR SALE the following SHARES, or ANY PART THEREOF, at LOWER PRICES than hitherto quoted:—
50 North Sortridge, 130 Sortridge and Bedford, 170 Mollard, 20 Great Sortridge, 210 North Hingston, 150 Great Wheel Hugo, 5 North Wheel Robert, 2 Great Sheba, 10 Wheel Edward, 20 Tamar Maria, 10 Quaintrell Downs, 155 West Sortridge, 20 Trevelyan, 50 Wheel Zion, 50 Tavy Consols, 30 Wood, 5 South Tamar, 40 Tavy Surprise, Crosby Hall Chambers, Bishopsgate-street, London.

JAMES F. BODDY, 48, THREADNEEDLE STREET, LONDON, begs to call the attention of the public to the present DEPRESSED STATE of the MINING MARKET, for INVESTING their CAPITAL in good, sound, MINING PROPERTY, paying regularly from 15 to 20 per cent. on outlay. No other investment affords so great advantages as judiciously selected mining stock.
J. F. Boddy will recommend many progressive mines of great promise, but are not to be taken in the selection of the same. Every information will be forwarded on application; likewise a list, and prices of the best dividend and progressive mines, free of charge.—Dec. 4, 1854.

MR. CARRY, MINING AGENT, TRANSACTS BUSINESS in BRITISH and FOREIGN MINES, in INSURANCE, BANKING, and RAILWAY SHARES, at the closest prices of the day.
Mr. Carry has FOR SALE SHARES in DIVIDEND-PAYING MINES, which, bought at present low prices, will pay from 20 to 30 per cent. And SHARES in good PROGRESSIVE MINES, with their machinery complete, and raising ores:—Hingston Down, North Downs, St. Day United, East Caradon, Cayman, Tamar, Sortridge Consols, Clew Bay, Mollard, Commartin, East Wheel Vor, Dalecarlia, &c. 20, Moorgate-street, City, Dec. 8, 1854.

POTLACK TIN AND COPPER MINES.—MR. W. CHARLES has SHARES FOR SALE in the above important MINES, which are now paying £10 per share every two months. W. CHARLES has SHARES FOR SALE also in the following:—viz., Great Crinnis, West Par Consols, East Caradon, Cayman, Kewick, Langford and Baring, Albion Clay, Wrygan Slate, North Trevelyan, and others. Mr. W. CHARLES is a BUYER in West Crinnis, Marks Valley, Union Tin, and others.—57, Abchurch-lane, Dec. 1, 1854.

MINING INVESTMENT.—T. FULLER AND CO., 51, THREADNEEDLE STREET, LONDON, beg to call attention to the favourable opportunity of INVESTING in BRITISH MINES, particularly in those dividing their profits every two or three months, which average from 15 to 30 per cent., with every prospect of continuance, and being free from fluctuation, such as Consols, railways, and other securities; and respectfully direct attention to the PURCHASE of SHARES in many PROGRESSIVE MINES, being in full operation, with efficient machinery, and for the development and bringing the same into a profitable state of working, which, at present prices, cannot fail to remunerate all who invest; a careful selection of such shares can be obtained by a daily communication with agents of high scientific and practical experience of the principal mines in Devon, Cornwall, and Wales. T. Fuller and Co. will furnish every information to capitalists, either personally by letter, and can effect purchases or sales of every description.

MR. CHARLES GURNEY, No. 4, CORBET COURT, GRACECHURCH STREET, LONDON, will be happy to PURCHASE or SELL SHARES in all DIVIDEND MINES, now paying from 15 to 30 per cent.; or in those mining under prospects of early dividends.

MINING PROPERTY.—MR. HERRON has SHARES in the best DIVIDEND-PAYING MINES FOR SALE, and which will give the purchaser 15 to 20 per cent. for the outlay. Amongst others are the following:—
Alfred Consols, West Caradon, Bedford United, Linares, Trevelyan, North Pool, Wheel Arthur, Alten, Trelawny, North Towy, St. John del Rey, Imperial Brazilian, South Bassett, South Tamar, Coburn, Hingston Down, South Frances, Great Devon Consols, Copple, Thomas's United, and also FOR SALE SHARES in NON-DIVIDEND PAYING MINES, which are worth attention at the present reduced market prices, such as:—
East Wheel Rose, Bryntail, Vale of Towy, North Wh. Robert, Gilmar, North Downs, North Towy, Tamar Consols, Great Alfred Consols, Gossens, Wheel Cupid, St. Day United, West Alfred Consols, Craddock Moor, Thomas's United, East Bassett, Mining Offices, 33, Clement's-lane, Lombard-street.

MR. JOSEPH JAMES REYNOLDS, STOCK AND SHARE BROKER, No. 31, THREADNEEDLE STREET, LONDON, TRANSACTS in every description of BRITISH and FOREIGN STOCKS, FUNDS, and SECURITIES; also, BRITISH and FOREIGN MINES.

GENERAL MINE AGENCY OFFICES, 3, NAG'S HEAD COURT, GRACECHURCH STREET, ST. PIERRE FOLEY, C. and M.E., Assisted by eminent Mining Engineers. Private address, 19, Gibson-square, Islington, London.

MR. EVAN HOPKINS, C.E., CONSULTING MINING ENGINEER.—MR. HOPKINS may be CONSULTED DAILY by gentlemen and capitalists who have invested, or may wish to invest their capital in MINES or MINERAL PROPERTIES—on all matters connected therewith—home and foreign. Also, in every description of METALS, MINERALS, ROCKS and their commercial value—NEW PATENTS, &c., so as to make a judicious selection and avoid questionable schemes.
Mr. Hopkins requests his ANNUAL CLIENTS to SEND him their PRESENT ADDRESS, and a list of the shares, &c., they now hold.
Mr. Hopkins is now prepared to receive prospectuses and reports on new undertakings, to give his opinion thereon, and to take an interest and an active part in the London management of any of the legitimate speculations he may recommend to his clients.—48, Thurlow-square, Brompton.

MR. JOHN H. CLEMENT begs to OFFER HIS SERVICES as CONSULTING MINING ENGINEER to gentlemen and capitalists holding, or wishing to hold, interests in mines or mineral properties in any part of the world. Mr. CLEMENT, having had a life-long experience in those matters in various parts of the globe, considers that he will be enabled to give the most careful advice, as to how and when to invest in mining property.
Address, 10, Gloucester-street, Camden-hill, Kensington.

CAPT. THOMAS DUNN, of TAVISTOCK, undertakes to INSPECT, REPORT, and SURVEY any MINES or MINERAL PROPERTY in ENGLAND, IRELAND, SCOTLAND, or WALES. No objection to take the management of any mine or mines in the neighbourhood of Tavistock.

MR. P. CADELL, Jun., may be CONSULTED on the subject of UNDERTAKINGS connected with GOLD MINING, including WATER COMPANIES, furnishing power and water at a distance from the permanent water-courses, which are at present the most productive source for investment in California. Address, Quartzburg, Mariposa County, California, Oct. 10, 1854.

MR. B. LAMBERT TENDERS HIS SERVICES TO PARTIES INVESTING in or SELLING MINING PROPERTY. By the soundness of the information to which he has access, and the bona fide character of the undertakings to which he directs attention, his constant endeavours are to secure the support of his clients.—Office, 3, Hatton-court, Threadneedle-street, City.

RAILWAYS AND MINES.—To Capitalists seeking investments it may be observed that the market prices of the day are governed more by the operations of speculators and the immediate abundance or scarcity of stock, than by any reference to the intrinsic worth of the property. Railways depend upon the paid-up capital, loans, traffic, and expenditure accounts; the probabilities of competition or alliance with neighbouring companies, the creation of new capital, and other circumstances to which those only can have access who give constant attention to the subject. Mines, on the contrary, are exempt from the vicissitudes of competition. Shares in the safest English dividend mines, pay at the rate of 15 to 25 per cent. per annum on the amount invested, without risk or liability. All the best mines are free from debt, and pay dividends regularly every two months. There are some very promising mines, in the most prosperous districts, fast approaching to a dividend-paying state, which will doubtless, in a short time, command prices far beyond their present market value. Judiciously selected, there are no securities which, with so much perfect safety, offer so wide a field for profit as English copper, tin, and lead mines. Every information afforded to capitalists seeking investments, or desirous of exchanging their securities, and sales or purchases effected upon the best possible terms. JAMES S. TRIPP and CO., 33, Clement's-lane, Lombard-street, London. Established 1839.

COBALT AND NICKEL.—ALFRED SENIOR MERRY, REFINER AND PURCHASER OF COBALT AND NICKEL ORES, and ASSAYER in GENERAL.—Address, LEE CRESCENT, BIRMINGHAM.

NICKEL AND COBALT REFINING, and GERMAN SILVER WORKS, MILL STREET, BROAD STREET, BIRMINGHAM.—STEPHEN GARKER begs to inform the Trade that he has the following articles for sale:—REFINED METALLIC NICKEL, OXIDE OF COBALT, (WIRE, &c.) REFINED METALLIC BISMUTH, GERMAN SILVER—in INGOTS, SHEET, NICKEL and COBALT ORES PURCHASED.

IBBOTSON BROTHERS and CO., SHEFFIELD, STEEL and FILE WORKS; also COARSE MERCHANTS for the SALE and PURCHASE of every description of MACHINERY, MACHINERY, and every article used by engineers, too numerous to enumerate in an advertisement.

MR. THOMAS EDINGTON (late Senior Partner of the Phoenix Ironworks, Glasgow), IRON MERCHANT, CONTRACTOR, AGENT for PATENTS, GENERAL COMMISSION AGENT, INSPECTOR of RAILWAY BARS and CASTINGS, 17, GORDON STREET, GLASGOW.
AGENT, on COMMISSION, for the PURCHASE of Scotch Pig-iron, Railway Bars, Bar-iron, Castings; and for the SALE of English Boiler and Ship Plates, Bar-iron, Angle and Rivet Iron, Anchors, Tinned Plates, Chains, Cables, Nails, Steel, &c.

MR. W. T. RICKARD, F.C.S., ANALYTICAL CHEMIST, Assayer of Copper and the Precious Metals, by Special Appointment of the CHILLIEN Government, ACORN VILLA, FORD ROAD, OLD FORD, LONDON.

GREAT WHEEL VOR UNITED MINES.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of adventurers in the above mines will be HELD at the London Tavern, Bishopsgate-street, on Wednesday, the 20th inst., at Two o'clock precisely.
R. T. ALISON, Sec.
17, Gracechurch-street, London, Dec. 4, 1854.

LACKMORE COPPER MINING COMPANY.—A GENERAL MEETING of the shareholders of this company will be HELD on Tuesday, the 19th day of Dec. inst., at One o'clock precisely, P.M., at the George and Vulture Tavern, Cornhill, in the City of London, for the purpose of receiving the accounts and a report upon the state of the mine, and for making arrangements for the future management of the concern. And such GENERAL MEETING will be made SPECIAL for the purpose of raising additional funds by the issue of the shares held in reserve, and for revising, altering, and amending, the rules in the Company-book.
London, Dec. 8, 1854. By order, JOHN HADDEN.

ST. JOHN DEL REY MINING COMPANY.—Notice is hereby given, that the TWENTY-FIFTH HALF-YEARLY DIVIDEND, being TWO POUNDS per share, free of income tax, on the shares of this company, will be PAYABLE at this office on Friday, the 15th day of December, and every succeeding day, Saturdays excepted, between the hours of Ten and Four. Forms for claiming the dividends may be obtained at the company's office, and must be left three clear days for examination previous to payment.
5, Tokenhouse-yard, Lothbury, Nov. 21, 1854. JOHN HOCKIN, Sec.

AGUA FRIA GOLD MINING COMPANY.—At the GENERAL MEETING of the shareholders of this company, held at the City of London Tavern, on Friday, the 8th December, JAMES CLAY, Esq., in the chair. The following resolutions were carried unanimously:—
Moved by the chairman, and seconded by G. Clive, Esq., That the report now read and the statement of accounts submitted to the meeting be approved and adopted.
Moved by S. Barnett, Esq., seconded by C. Satterthwaite, Esq.:—That G. Clive, Esq., be re-elected a director of the company.
Moved by G. P. Dawson, Esq., seconded by G. W. Slack, Esq.:—That E. M. Fenwick, Esq., and J. P. Judd, Esq., be re-elected auditors of the company.
Moved by J. Wood, Esq., seconded by B. Kent, Esq.:—That the thanks of the directors be tendered to the directors for their efficient management of the affairs of the company, and to the chairman for his urbanity and able conduct in the chair.
By order, WILLIAM J. VIAN, Sec.
Office, 3, Old Broad-street, London.

GEORGE MOORE HAS FOR SALE, OR ANY PART, the following SHARES, at LOWER PRICES than have hitherto been quoted:—
200 Bedford and Sortridge, 100 Great Sortridge, 50 Red Dragon, 25 Boringdon Consols, 50 Great Wheel Hugo, 20 Sortridge, 25 Bryntail, 20 Great Baddern, 50 Tavy Consols, 20 Crebor, 100 Kilraire, 20 West Jane, 100 Cae Glyn, 100 Mollard, 20 West Sortridge, 50 Cwm Darren, 180 North Sortridge, 50 Wheel Uny, 50 East Wheel Vor, 5 North Robert, 50 Wheel Russell, 50 East Frogoch, 100 Nanteos and Penrhyn, 20 Yeoland, 25 North Hingston.
A correct price of any of the above shares will be forwarded on application. GEORGE MOORE is a BUYER of 30 Trevelyan and 30 Kewick, at market prices. 31, Nicholas-lane, Lombard-street. (Sworn Broker.)

MESSRS. POWELL AND COOKE, MINING AGENTS, 1, CROWN COURT, THREADNEEDLE STREET, LONDON.

£25,000.—THE SWANSEA HARBOUR TRUSTEES are prepared to receive TENDERS for the LOAN of TWENTY-FIVE THOUSAND POUNDS, on MORTGAGE of the RATES and TOLLS authorized to be demanded and levied under the provisions of the Swansea Harbour Act, 1854, in sums of not less than £100. Interest 5 per cent., payable half-yearly. Term, seven years.—For further particulars, apply to Mr. LEWIS THOMAS, solicitor, Swansea.

TO SMELTERS OF CARBONATE OF LEAD ORES.—WANTED, by the SOUTH AUSTRALIAN COPPER MINING COMPANY, a good PRACTICAL SMELTER of CARBONATE OF LEAD ORES and GALENAS, to proceed to the mines at Strathbryn, South Australia, immediately. Reference to last employers must be given.—Apply personally, or by letter, to Mr. WEAVER, C.E., 11, New Broad-street, City.—Dec. 8, 1854.

TO MINING COMPANIES AND OTHERS.—A GENTLEMAN, who has for some years acted as MANAGING DIRECTOR of one of the most important companies in Rhensia Prussia and Westphalia, wishes to CHANGE his present SITUATION, and JOIN an ENGLISH COMPANY, at home or abroad. He is connected with several noble families, and is intimately acquainted with mining business, and the German, French, and English laws relating to mines, as well as with the languages of those countries. He can be highly recommended, and will give the most satisfactory references.—Address, "X. Z., Porter's Lodge, Lincoln's Inn.

TO MINING AGENTS AND OTHERS.—The ADVERTISER is desirous to WORK and SMELT some extensive and very RICH COPPER MINES that he possesses, and would be glad to MEET with a FEW GENTLEMEN to FORM a COMPANY for that purpose. Respectable parties only will be treated with, who will find this well worthy of their attention.—Address, by letter, to "L. L." Mr. Roxbrough, manufacturing stationer, 9, Aldgate, City.

TO GENTLEMEN OF INFLUENCE.—The ADVERTISER is desirous to WORK some extensive and very RICH IRON and COAL MINES that he possesses, and would be glad with the CO-OPERATION of GENTLEMEN of INFLUENCE to assist him in FORMING a COMPANY for that purpose. The property is bona fide, will bear the strictest investigation, and will be brought out in a perfectly legitimate manner, and yield a large return. This is worth special attention, and respectable parties will be treated with confidence and liberality.—Address, "B. C. D.," to the care of Mr. Fryer, Newnham, Gloucestershire.

MINING MANAGEMENT.—A GENTLEMAN, of considerable experience in the management of companies worked on the Cost-book System, and having suitable offices for the purpose, is PREPARED to TAKE the PURSE-SHIP and ENTIRE TOWN MANAGEMENT of any genuine undertaking. References can be given to the chairmen or to the committees of the companies with which the advertiser has been connected.—Address in the first instance, with particulars, to "B. S.," Mining Journal office, 20, Fleet-street, London.

COAL AND IRON ORE.—A GENTLEMAN possessing a COAL SETT in the West of Scotland, partially proved, is desirous of DISPOSING of PART of HIS INTEREST therein, or for some respectable party to JOIN him in FORMING a COMPANY for developing and working the same. The sett extends over about 3000 acres; and, besides coal, there are extensive beds of brown hematite iron ore on the property.—Apply, by letter (post paid), to "G. A.," 15, Charingcross, London.

WANTED.—A GENTLEMAN, well versed in mining matters, having for the last six years held the post of secretary to several important mining companies, wishes for some employment as CLERK, or otherwise, in a MINING or OTHER OFFICE. From his long experience, he has a knowledge of accounts and bookkeeping, and every other matter relative to mining transactions. As he but seeks employment, a moderate salary would only be expected. First-rate testimonials as to ability, &c.—Address, "E. N. S.," Post-office, Cornhill.

WANTED, a SITUATION as LEAD MINE AGENT, by a person who has had a first-rate mining education, and can produce first-class testimonials.—Apply, "H. M. S.," 5, Argyll-place, Newcastle-on-Tyne.

WANTED, at the UNYSCEDWYN IRONWORKS, near SWANSEA, a MANAGER. No party need apply whose character and competency will not bear the strictest investigation.—Apply to JAMES STRICK, Esq., Swansea.

WANTED.—A NEW or SECOND-HAND HIGH-PRESSURE STEAM-ENGINE, 16 to 20 inch cylinder, with or without boilers. A horizontal one preferred.—Address, with price and full particulars, "Box A.," Post-office, Banabon.

BRISTOL MINING INSTITUTE.—WANTED, an EXPERIENCED TEACHER and LECTURER, acquainted with the art of coal mining, with its best examples and its latest improvements; as well as with surveying, drawing, bookkeeping, and the application of the sciences of mathematics, mechanics, and geology. Salary not under £200 per annum. Detail of qualifications and testimonials to be sent to Mr. HANDEL COPEMAN, Shootwood Lodge, near Bristol, on or before the 1st January, 1855. All applications to be in writing.

GREAT CRINNIS COPPER MINE, ST. AUSTELL.—A NUMBER OF TRIBUTERS are REQUIRED on this MINE, to work silver-lead ores.—Apply immediately to Mr. Shaw, at the mine.
26, Austinfrs., By order, R. C. MANUEL, Sec.

CHARLESTOWN UNITED MINES.—Notice is hereby given, that CAPT. JOHN DALE, of the parish of St. Stephens, Cornwall, is the ONLY MANAGING AGENT of this MINE authorised by the committee and the adventurers; and that the adventurers will NOT RECOGNISE or be RESPONSIBLE for the ACTS of any OTHER PERSONS who may assume to act as agent.
ROBERT WALKER CHILDS, 25, Coleman-street, London.
Dated this 8th Dec., 1854. Solicitor for the adventurers.

EAST ANNAGH SILVER-LEAD MINING COMPANY.—Notice is hereby given, that FRIDAY NEXT, the 15th inst., is the LAST DAY for the EXCHANGE of the SHARES of this company for those of the KERRY MINING COMPANY, at their offices, 18, King's Arms-yard, Moorgate-street (those shares under special agreement excepted).
F. S. STOKES, Sec.
Cannon House, 28, Queen-street, Dec. 9, 1854.

ARUNDELL COPPER MINE.—WANTED TO PURCHASE, 100 to 500 Shares. TASSAN LEAD.—100 Shares FOR SALE, at 7s. 6d.—Apply to Mr. J. H. MANDEVILLE, 1, Great Winchester-street, City.

SOUTH TAMAR.—WANTED, TEN SHARES, for IMMEDIATE CASH.—Price and particulars to be sent to "A. Z.," 15, Harpur-street, Red Lion-square.

LEEDS TOWN CONSOLS.—MR. R. TREDINNICK, 4, AUSTIN-FRIARS, is a PURCHASER of any number of these shares, at 21 per share.
5 to 1000.—London, Dec. 1, 1854.

BULLER and BASSETT UNITED.—WANTED, a 40 to 50 inch PUMPING ENGINE, with boiler, capstan, shears, and whelm, complete.—Price and particulars to be forwarded to CAPT. PETER FLOYD, Pool, Cornwall; or MR. R. TREDINNICK, 4, Austinfrs., London.—London, Dec. 1, 1854.

TO MEMBERS OF PARLIAMENT.—TO BE SOLD, the MODEL of an ENGINE of WAR. One man, in firing a musket or rifle, doing the work of twenty men in line; with true aim and celerity of motion, by which there is a great saving of life and expense. Letters on this subject, addressed to the Minister of War and Ordnance, remain unnoticed; the sum asked was £10,000, conditionally, if adopted in the army.—Address, "To an Old Officer," care of Mr. Wagner, 17, North Audley-street, Grosvenor-square.

VALUABLE SILVER-LEAD AND ANTIMONY MINE, DEVONSHIRE.—TO BE SOLD, the MINING LEASE for 30 years, at 1-16th dues of the above MINE, situate in the North of Devon, and only a few miles from the Devon Great Consols Mines. A shaft sunk several fathoms, and three levels driven, have fairly developed the ground. A horse-wheel is erected, and other appliances for immediate working the mine, are advantages seldom to be obtained under equally favourable circumstances. The mine is held by three parties, two of whom having left England is the sole reason the lease is to be disposed of.—Further particulars, and samples of the ores, to be had at the Mining Estate Agency Office, 18, King's Arms-yard, Moorgate-street.

FOREIGN VINEYARD ASSOCIATION.
 Completely registered, capital £200,000, in 10,000 shares, for the supply of
 Wines to Private Families, Hotels, Messes, Clubs, &c.
CHAIRMAN—The Right Hon. Lord MURKERRY, Carlton Club.
MANAGER—T. W. STAPLETON, Esq., 51, King-street, E.C. 4.
 The whole scale of prices is adopted by this company. All wines will be strictly
 of the growth represented, and in every case pure. Private families can have same
 in large or small quantities, for prompt payment, after receipt and approval of samples.
 Examples of advantage in prices:—The finest Chateau Champagne, hitherto charged
 £10 10s., now £6 6s. per case of 36 quarts; Most and Chandon's first quality (direct
 from the firm), hitherto £12 12s., now £8 8s.; Claret, the finest Chateau St. Margaux,
 or Chateau Brane Cantenac, both under lease to the company, formerly £12 12s., now
 £7 7s.; Sherries, formerly 36s., now 28s. per dozen; finest Xeres imported, 50s., now
 45s.; Ports in same ratio; finest Cognac, pale or brown, 30s. per gallon.

INDISPUTABLE LIFE POLICY COMPANY.
 12, LOMBARD STREET, and 24, CONNAUGHT TERRACE.
TRUSTEES.
 RICHARD MALINS, Esq., Q.C., M.P. RICHARD SPOONER, Esq., M.P.
 JAMES FULLER MADON, Esq. JOHN CAMPBELL KENTON, Esq.
 WILLIAM WILBERFORCE, Esq.
 A reduction of 25 per cent. has been made on the premiums of all policies of five
 years' standing.
ALEX. ROBERTSON, Manager.

ECONOMIC LIFE ASSURANCE SOCIETY.
 The Right Hon. Sir T. FRANKLAND LEWIS, Bart., M.P., Chairman.
 HENRY FREDERICK STEPHENSON, Esq., Deputy-Chairman.
ADVANTAGES.
 The LOWEST RATES OF PREMIUM ON THE MUTUAL SYSTEM.
 THE WHOLE OF THE PROFITS divided amongst the assured every fifth year.
 No charge for policy stamps, nor for service in the Yeomanry or Militia corps.
 Policies in force, nearly 7000.
 The Assurance Fund exceeds £1,400,000. Income upwards of £230,000 per annum.
 The sum of £207,000 was added to policies in the last division, which produced an
 average bonus of 657 per cent. on the premiums paid.
 For particulars, apply to
ALEXANDER MACDONALD, Secretary, 6, New Bridge-street, Blackfriars.
SPECIAL NOTICE.—Proposals for assurance must be made prior to the 1st Jan.,
 1853, to entitle the assured to participate in the next division of profits, in 1853.

ARK INDISPUTABLE MUTUAL ASSURANCE SOCIETY.
CHIEF OFFICES.—No. 138, LEADENHALL STREET, LONDON.
 Established 1852—Incorporated Pursuant to Act of Parliament.
 Guarantee Capital, £100,000.

The Hon. FRANCIS HENRY FITZGERALD BERKELEY, M.P., Victoria-
 square, Piccadilly.
JOHN SADLER, Esq., M.P., Gloucester-square, Hyde-park.
SAMUEL CARTWRIGHT, Esq., F.R.S., Old Burlington-street.
ROBERT KEATING, Esq., M.P., Clapham-park, Surrey.
J. W. WATSON, Esq., Ph.D., C.E., F.G.S., Upper Brook-st., Grosvenor-square.
DIRECTORS.
SAMUEL CARTWRIGHT, Esq., F.R.S., Old Burlington-street.
CHARLES NICHOLSON, Esq., Paul's Church-yard.
JOHN GRANTHAM ROBINSON, Esq., Garter's-grove, Brompton.
Hon. C. T. SPEFFINGTON, St. John's Villas, Upper Holloway.
WILLIAM EKFORTH TUCKER, Esq., Upper Avenue-road, Regent's-Park.
J. W. WATSON, Esq., Ph.D., C.E., F.G.S., Upper Brook-st., Grosvenor-square.
AUDITORS.—Anthony Peck, Esq., M.A., Public Auditor; William Slade Parker, Esq.,
 Henry Chatteris, Esq.
MEDICAL OFFICERS.—Erasmus Wilson, Esq., F.R.S., and F.R.C.S., Henrietta-street,
 Cavendish-square; Richard Quain, Esq., M.D., Harley-street, Cavendish-square.
CONSULTING ACTUARY.—Arthur Serattley, Esq., M.A., F.R.A.S.
ACTUARY.—William Bridges, Esq., F.R.S.
BANKERS.—The London and County Bank, 21, Lombard-street, City; St. George's
 place, Knightsbridge; and Connaught-terrace, Edgware-road; and most of the
 Provincial Towns.

SOLICITORS.—Messrs. Long and Long, Cornhill.
SECRETARY.—John Madden, Esq.
CHIEF OFFICES.—138, LEADENHALL STREET, LONDON.

This society continues to grant policies, and includes amongst its leading features
 the following:—

1. An ample guarantee capital.
2. The whole of the profits, after deducting the necessary percentage for the guar-
 antee capital, are divisible amongst the assured.
3. The policies are absolutely indisputable, and their validity cannot, under any cir-
 cumstances whatever, be contested against the children or assignees of the assured,
 except in cases of fraud.
4. The annuities issued by the society increase periodically, from a share of the pro-
 fits arising in that department.
5. Self-protecting policies are issued, combining the advantages of an endowment
 at a specified age to accrue to the assured himself, or an annuity payable during his
 life, to commence from the period when he would receive such endowment, or an as-
 surance payable to his heirs in the event of his not attaining the specified age.
6. Policies can be effected upon which only one-half of the premium need be paid
 for the first five years; the remaining half being payable at the convenience of the
 assured, or deducting ultimately from the sum assured. Credit is also given for the
 whole amount of the first five years' premium on collateral security.
7. Temporary advances are made to parties who are unable to pay their premiums
 as they fall due, and to facilitate the effecting of new assurances.
8. Apprentice fee endowments are granted, also endowments to educate and por-
 tion children.
9. Policies effected for the whole of life are transferable to other lives or not of greater
 age, and of good health at the time of transfer. Creditors assuring the lives of debtors
 find this feature peculiarly advantageous.
10. The amount assured, when it becomes a claim, remain at interest (from
 4 per cent. upwards) with the society for an agreed term of years, subject to six
 months' notice on either side. This will be found of great convenience to widows and
 others who have merely a life interest in the sum assured, and who have no other
 channel of investment but the public funds, which give but 3 per cent.
11. Clergymen can obtain advances to assist them making repairs in parsonage
 houses, and other tenements on church property, and to meet the outlay for dis-
 pensions.
12. In the event of a policy being surrendered through the absolute incapacity
 of the assured to continue his payments, the society guarantees to give the assured
 free policy for a reduced amount payable at death, and equal to the value of the policy
 which he discontinues. It is unnecessary to insist upon the importance of this fea-
 ture, which is quite novel in life assurance.
13. A diminution of half-a-year is made on the amount of premiums, when persons
 assure within six months of their last birthday.
14. The charges for policy stamps and medical examination are in all cases defrayed
 by the society itself, and no entrance fees are required.
15. Premiums may be paid annually, half-yearly, or quarterly.
16. Thirty days' grace allowed for the payment of premiums payable yearly; and
 15 days for those payable half-yearly or quarterly.
17. Lapsed policies may be revived within six months, upon satisfactory evidence
 of unimpaired health, and upon payment of a small fine in addition to arrears of pre-
 mium with interest.
18. Transfers and assignments are recognised and allowed by the society.
19. No extra premium is required from persons living during time of peace in any
 part of the world, not within 35° on either side of the equator.
20. All claims are paid within three months after proof of death, or sooner with
 discount.

Every risk or contingency, whether for families, joint lives, or individuals, is un-
 derwritten by the Ark Indisputable Mutual Assurance Society.

ACCIDENT DEPARTMENT ON THE MUTUAL PRINCIPLE.

Assurances are granted by the society against fatal accident, or against serious ac-
 cident whether fatal or not. And fixed weekly sums are allowed during disability
 arising from any kind of accident which does not terminate fatally, together with a
 sum for medical expenses, and a fixed sum payable at death. In order to provide
 for the risk of those engaged in naval and military pursuits, assurances are granted
 against death or loss of limb by accident or violence from any cause whatever. This
 species of assurance is also particularly valuable to miners, colliers, quarrymen, and
 others engaged in dangerous occupations where there is a peril of a like nature. In
 case of death after ten years of such an assurance without accident, a share in the
 profits of this department will be paid to the assured's representatives.

See prospectus of the Accident Department for further details of this new feature,
 which has been settled specially for the Ark by the eminent secretary, ARTHUR SCRATCH-
 LEY, Esq., M.A.

SAVINGS' BANK AND LIFE ASSURANCE DEPOSIT DEPARTMENT.

Assurances are granted by the society, payable at death, on the deposit of any sum
 whatever, with power to the assured at any time during his life to withdraw the whole,
 or any part, of the amount paid, together with Savings' Bank interest thereon. This
 is obviously (to the middle and lower classes) one of the most useful features yet in-
 troduced into the system of life assurance.

AGENTS WANTED.

ASTHMA, COUGHS, COLDS.—ONE OF DR. LOCOCK'S PUL-
 MONIC WAFERS, allowed to dissolve in the mouth, immediately RELIEVES
 the most violent ASTHMA, COUGH, or COLD, and protects weak lungs from all the
 irritation of fog and frosts.—Sold by all chemists at 1s. 1½d., 2s. 9d., and 11s. per box.

DEAFNESS! DEAFNESS!—IMPORTANT DISCOVERY.
 Dr. MANFRED, M.R.C.S., has this day published, free by post for eight
 postage stamps, a "PHYSICIAN'S GUIDE FOR COUNTRY PATIENTS," for the
 PERFECT and PERMANENT RESTORATION OF HEARING, by his invaluable
 new treatment. Being a step to quackery, cruel impositions on the suffering public,
 and extortionate charges, this book will save thousands from the impositions of the
 self-styled doctors, inasmuch as the hearing can be restored for life. Deafness of the
 most inveterate nature relieved in half-an-hour, cured in a few hours, and almost in-
 stant cessation of noises in the ears and head, by painless treatment. Hundreds of
 letters may be seen, and persons referred to, who have heard the usual tone of con-
 versation in a few hours.—Patients received daily at Dr. Manfred's residence, 73,
 Regent-street, London (first door in Air-street), where all letters must be addressed.

The GLENFIELD PATENT STARCH, used in Her Majesty's laundry, is
 sold by all grocers and silvers; by Robert Wetherston and Co., 40, Dunlop-street,
 Glasgow; and Wetherston, Mackay, and Co., 66, Queen-street, Chesapeake, London.

**HOLLOWAY'S PILLS EFFECTED ANOTHER CURE OF THE DIGESTIVE OR-
 GANS.**—Mr. Andrew Dawson, of Melbourne, was a constant sufferer from indigestion.
 No matter what he ate, the difficulty of digesting it was always the same, for which
 he consulted many of the medical profession, and tried remedy after remedy without
 obtaining any benefit whatever. Being nearly dispirited with continual suffering he
 was advised to try Holloway's pills. He did so, and adhered to the diet recommended
 by the directions; thus he has strengthened the tone of his stomach, and increased
 his appetite, that he can now indulge in any kind of animal or other food without the
 least inconvenience.—Sold by all druggists, and at Prof. Holloway's establishment,
 544, Strand, London, and 90, Maiden-lane, New York.

PENINSULAR AND ORIENTAL STEAM NAVIGATION CO.

A meeting of the proprietors was held at the offices of the company, Leadenhall-
 street, on Wednesday, the 6th inst.—Admiral THOMSON in the chair.

Mr. HOWELL (the secretary) read a note from Sir James Matheson, Bart., M.P.,
 the chairman of the directors, excusing his absence, on the ground of the indisposi-
 tion of Lady Matheson, compelling him to accompany her ladyship to Italy, and con-
 gratulating the proprietors on the satisfactory position of their affairs. The notice
 convening the meeting was then read, and the following report of the directors:—

In accordance with the standing resolution to that effect, a statement of the ac-
 counts, duly audited, together with the supplementary documents, have been laid on
 the board-room table, during the last seven days, for the inspection of such propie-
 tors as might be desirous of examining the same.

These accounts exhibit, in abstract, the following state of the company's assets,
 and result of the year's operations, namely:—

THE CAPITAL ACCOUNT	
Shows that the company stock possessed, on the 30th September	
last, of stock in ships, hulks, barges, docks, workshops, build- ings, freehold and leasehold, in payments made on contracts for vessels in course of construction, stock of coals on hand, and naval and victualling stores, to the value of	£2,558,795 3 5
Also in cash at the bankers, bills receivable, balances in the hands of agents, and debts due to the company, in the course of liq- uidation	102,090 15 9
Total assets	£2,560,885 19 4
That the capital on shares, received from the	£1,447,405 0 0
proprietors at that date, amounted to	
And raised on debentures	500,000 0 0
Total capital	£1,947,405 0 0
That the liabilities of the company, on the 30th September last, able and otherwise, were	339,623 1 3
Making the total capital and liabilities	£2,287,028 1 3
Showing a surplus of assets of	£263,866 17 11

This surplus is represented by the balances at the credit of the Depreciation and
 Guarantee Insurance funds, which have been temporarily employed for purposes of
 capital.

THE REVENUE ACCOUNT
 Shows that the gross revenue or income of the company, from
 freight, passage-money, postal service contracts, hire of ships
 in the war service, and other sources, including the balance
 of undivided profits (£4111.7s. 11d.) brought forward from last
 year, amounted, for the 12 months ending 30th Sept. last, to
 That the total charge of all kinds on the revenue, including
 including interest on debentures, and the reserve made for re-
 pairs, insurance, and depreciation, amounted for the same period to

Leaving a net profit of	£ 69,348 10 9
Out of which it is proposed to pay dividend for the year of 5 per cent. on the share capital, estimated to amount to	66,230 0 0
Leaving a balance of	£ 3,118 10 9
Of which it is proposed to apply in aid of a bonus, as subsequently explained	2,284 0 0
And there will remain undivided, and to be carried to next year's account	£ 834 10 9

GUARANTEE INSURANCE FUND.
 Amount of this fund, September, 1853 £215,624 14 9
 Add 4 per cent. for sea risks on ships, valued at 50,000 0 0 = £265,624 14 9
 1,250,000 of the year's revenue, which would have been available for other
 dividend damages and law expenses, in the event of a collision, the directors
 collision of *Erin* and *Pacha* £ 46,738 7 8
 Cost of *Douro*, lost in the China seas in June last, 31,671 10 2 = 78,410 17 10

And there remains at the credit of this fund, £185,213 16 11

**SETTLEMENT OF THE CLAIM ON THE GOVERNMENT IN RESPECT OF THE CONTRACT
 POSTAL SERVICE.**—The proceedings of the directors, with a view to obtain some
 relief from the Government on account of the enhanced cost of fuel, wages, &c., in the ex-
 ecution of the contract postal service, caused by the war, were stated in the last half-
 yearly report. The commissioners appointed by the Admiralty to investigate the claim
 were furnished by the directors with all necessary information for that object, and made
 a report thereon. As that report was considered a confidential communication, the di-
 rectors have had no means of ascertaining its import. Aware, however, that under the
 present pressure on the public exchequer, caused by the expenses of the war, to obtain
 any direct pecuniary compensation, on account of the claim in question, would be attended
 with considerable difficulty: while from the reaction which has recently taken place in
 the rates of freight, and consequent reduction of the cost of transport for fuel, such pecu-
 niary compensation could only be claimed for the period over which the consumption
 of fuel laid in at the high prices obtained by the directors was excessive, and which
 would relieve the Government from any pecuniary claim, and involve the least possible
 detriment to the public postal service. They, therefore, proposed to the Government that
 the company should be permitted to give up one of the semi-monthly lines of postal com-
 munication between Bombay and Hong Kong, reducing that service to a monthly com-
 munication, but extending it to the northernmost and now most important open port of
 China—Shanghai: an arrangement which is understood to be in accordance with the
 wishes of the merchants and others connected with the China trade. And as this modifi-
 cation of the service would relieve the company of a considerable expense, the directors
 offered to accept it in lieu of any pecuniary indemnification. This proposal has been ac-
 cepted by the Government, with a reservation as to time, which the directors consider
 of little importance.

**WITHDRAWAL OF A PART OF THE COMPANY'S FLEET BY THE GOVERNMENT FOR THE
 WAR SERVICE.**—The proprietors will see, by the prefixed list of their fleet, that the
 Government, availing themselves of the powers with which the postal contracts invest
 them, have withdrawn a number of the company's ships for the conveyance of troops,
 and other services, in carrying on the war with Russia. The postal contracts contain a
 stipulation that, in the event of war or other emergency, the Government may withdraw
 the vessels from the postal service, and employ them, either by purchase or hire, in the
 exclusive service of the public. But, in giving this power to the Government, it is also
 provided that the company shall be indemnified, and that if the Government and the
 company cannot agree to the amount of indemnification, the question shall be referred
 to arbitration—one arbitrator to be chosen by the Government, and another by the com-
 pany, with an umpire in the usual manner. While the requirements of the Government
 were limited, as at first, to two or three of the vessels, and as the directors were led to
 believe, for a temporary service, they were content to accept for them the same terms
 stipulated in the contract, and to pay to the Government for their hire, the same as they
 would have paid for the hire of other vessels of similar tonnage. The demands of the Govern-
 ment having, however, recently been extended to no less than six of the best and largest
 of the company's ships, the means of the company for meeting the requirements of their
 extensive passenger and goods traffic (whence five-sixths of their income is derived)
 have been materially crippled, and serious detriment to your interests, in that respect,
 has in consequence ensued. Looking to that circumstance, the directors have not named
 any rate of hire for the vessels recently withdrawn, in order to leave the question open for
 settlement, in case of need, under the indemnity clause, above referred to in the postal contract.

SUSPENSION OF THE AUSTRALIAN BRANCH OF THE POSTAL SERVICE.—In consequence
 of the improvement by the Government of so many of the company's ships for the re-
 quirements of the war service, which were destined to reinforce the company's fleet in
 the Indian Seas, the directors have found that it would be impossible, with the present
 means of the company in those seas, to maintain the Australian postal com-
 munication, and the India and China seas, at the same time. They have, therefore,
 recently pointed out this circumstance to the Government, and proposed that the com-
 pany should be relieved of the Australian branch of the postal contract of £24,000 per
 annum, by the Government, under the postal contract of £24,000 per annum, on the
 mileage distance now performed on that branch of service, from the time of its discon-
 tinuance; the amount so to be deducted being £17,131 per annum. The Government have
 acceded to this proposal, and the outward service to Australia will cease with the deli-
 very there of the mail of the 4th—9th of last month. The suspension of this line, under
 the circumstances above stated, will, no doubt, necessitate the consideration and adop-
 tion of a system of steam postal communication with Australia more in accordance with
 the wants and just demands of these most important colonies than the very inadequate
 arrangements made and lately in operation, and, probably, before this company, the holder
 of a position, by the release of the vessels from this war service, to resume the Australian
 line, a new plan will be formed, better adapted to develop a passenger traffic with Aus-
 tralia, and such as to enable them to undertake the service on terms affording a better
 prospect of remuneration for it.

BONUS.—The loss of the *Douro*, and the expediency of replacing, as soon as pos-
 sible, the sum deducted from the Guarantee Insurance Fund for the extraordinary dam-
 ages and expenses incurred by the collision of the *Pacha* and *Erin*, preclude any pay-
 ment being made this year, as formerly, to the proprietors, on account of premiums on
 under-writing risks. The directors have, however, the pleasure to announce that a sum
 has been realized, from a source unconnected with the ordinary operations of the com-
 pany, from which the deficiency on the insurance account may be compensated. Some
 time since the directors, to secure and liquidate a debt due to the company, were com-
 pelled to take from the debtors a large number of the company's shares; these, with a further
 number of shares, forfeited by parties in India, and otherwise reverting to the company,
 the directors have disposed of from time to time, as opportunities offered to do so with
 advantage. The last of these shares were only recently sold, and the result of the whole
 of the sales is a profit of £7,164. To this sum the directors propose to add, from the
 balance of profits of the year, £2944, making up the sum of £10,108, which they recom-
 mend to be divided among the proprietors in a bonus of 14 per share, and that it be made
 payable in the course of the ensuing month of January.

INCREASE OF CAPITAL.—The proprietors were informed, in the last half-yearly re-
 port, that a supplemental charter had been obtained from the Crown, empowering the
 company to increase its capital by one million sterling, by the creation and issue of
 20,000 shares of 50s. each; such shares to be offered at par, in the first instance, to the
 holders of existing shares. The position of the company, with reference to the high cost
 of fuel, and the unfavourable state of the money market, has hitherto induced the di-
 rectors to defer making these shares, considering that it would be more advantageous to
 the company's interest to avail themselves of the guarantee insurance fund and unappropri-
 ated reserves for depreciation, as shown by the capital account, than to call up additional
 capital under such unfavourable circumstances. The time has now, however, they con-
 sider arrived when a portion of the additional capital may be called up with advantage.
 They, therefore, propose to issue the whole of the additional shares, offering them to the
 holders of the shares who shall be registered in the company's books on the 1st January,
 1855, in the proportion of two new shares to three old shares. A deposit of 6s. per share,
 to be paid by shareholders resident in the United Kingdom, on or before 1st February,
 1855; on the production of a receipt, and the company's books for the number of shares taken up.
 A longer period will be granted to shareholders resident in India and other places abroad. Interest
 at the rate of 5 per cent. per annum to be allowed on this deposit from the 1st February
 to the 31st March, at which latter date an instalment of 6s. will be called for; and the

amount of 10s. per share, then paid, will be thereforward entitled to participate in the
 regular dividends. Further details of the conditions under which the new shares will be
 issued will be circulated among the proprietors for their information.

LOSS OF THE STEAM SHIP "DOURO."—The directors regret to have to report the
 total loss of the above vessel on the North Pacific Coast, in the China Sea, on the 24th
 of May last, having been previously disabled in a typhoon. On a rigid investigation into
 the circumstances, no blame could be attached to the commander or officers for the ship
 getting on the shoal. The directors have the satisfaction to notice the very spirited con-
 duct of the second officer of the *Douro*, Mr. C. G. Baker, and Mr. W. Norris, a first officer
 in the company's service, then on his way home on sick-certificate, who preceded the
 small open boat from the place where the vessel was wrecked to Hong Kong, a distance
 of upwards of 300 miles, to obtain the assistance of some of the company's other vessels,
 which they accomplished in a hazardous sea, by great exertion and risk. In order to
 mark their sense of the praiseworthy conduct of these two officers, the directors have or-
 dered a suitable testimonial to be presented to each of them.

COMMENCEMENT OF THE ROYAL MAIL SERVICE BY THE COMPANY.—The com-
 munication of the above service, under the contract entered into with the Admiralty,
 was fixed for the mail of the 4th, 5th, December, from London, and of the 11th, December,
 from Bombay. As the Government, however, have decided on bringing a cavalry regi-
 ment from Bombay via Egypt, for service in the war, and have intimated that they will
 require the services of some of the company's vessels for the transport of the regiment
 to Suez, it is not improbable that the postal service may yet be confined to the hands
 of the Messrs. East India Company for a short time. On the service being undertaken
 by this company, the directors will, if their means admit, and the passenger traffic should
 require it, run the vessels through to Suez, for the better accommodation of passengers and
 from Western India.

RESIGNATION OF MR. WILCOX, M.P., FROM THE MANAGING DIRECTORSHIP.—According
 to the intimation which he made at the last general meeting, Mr. Wilcox, relinquish-
 ing his position and emoluments, as one of the managing directors originally appointed un-
 der the Deed of Settlement, and from the 1st October last. Although ceasing to be a
 managing director, your directors are happy to say that their honorable and much re-
 spected colleague continues to afford his valuable assistance in the conduct of the com-
 pany's affairs, as a member of the general board. He has further, at the request of the
 directors, kindly undertaken to proceed on a mission to Egypt, to present on behalf of
 the company an address of congratulation to His Highness Said Pacha, on the occasion
 of that prince to the vice-royalty of Egypt, and proceeded on that mission on the 4th
 inst. The executive management of the company's affairs is now conducted by the re-
 maining managing directors, Mr. Anderson and Mr. Allan. Mr. Anderson, while re-
 taining, for the benefit of the company, the larger portion of his emoluments, con-
 tinues to retain his position as an original managing director, and to discharge the
 duties of that office.

RESIGNATION OF HIS GRACE AT THE BOARD, BY MR. C. WYLLIAMS.—The direc-
 tors regret to announce that the same of this respected gentleman is no longer associ-
 ated with the direction, in consequence of his having recently sent in the resignation of his
 seat at the board. Although from Mr. Williams being resident in Liverpool, and also
 being actively occupied with his duties as managing director of the City of Dublin Steam
 Packet Company, his seat at this board might be considered, in a great measure, an
 honorary, the directors are sorry that a feeling, arising partly, they believe, from that
 circumstance, and partly from ill health, should have induced him to adopt a measure
 which withdraws his name from a position in this enterprise to which his valuable as-
 sistance in its origin, and his well-known services in the improvement of steam naviga-
 tion, so well entitled him.

In concluding this report, your directors would take leave to remark that, considering
 the difficulties and disadvantages which have attended the operations of the company
 during the past financial year, in the greatly enhanced cost of coals, and other ex-
 penses of navigation, together with a large outlay of capital on ships in course of construction,
 and, consequently, for a time unproductive, the result of the year's accounts may be
 viewed with satisfaction. Of the future year's directors would, on all occasions, speak
 guardedly. They deem it, however, not improper to place under your consideration the
 following facts. That ample provision has been made for maintaining the value of your
 property at its original cost, and for guaranteeing it against extraordinary expenses.
 The freight of shipping, and consequently the cost of coals at the various steam sta-
 tions has recently been considerably reduced. That various coal deposits in the East,
 in addition to that at Lahman, have been recently opened, and are being worked, and will,
 in case of another scarcity of shipping and rise of freights, render the company, to a
 great extent, independent of supplies from this country for their more distant stations.
 That a number of new vessels, recently completed, with others nearly finished, have
 been added to your fleet—all with screw propulsion. That these vessels are adapted
 by their larger capacity and reduced navigation, as compared with paddle-wheel steam-
 ers, to increase the earnings and lessen the expenses of the company. And that, in arrange-
 ing the withdrawal of so many of them for the war service deprives the company of the
 anticipated advantages for the present, the postal contract gives you a right to indemnity,
 should any loss be sustained on that account. These facts your directors submit as
 substantial grounds for confidence in the present condition and continued future satis-
 factory progress of your enterprise.

DIVIDEND.—They now recommend that a dividend of 5 per cent, clear of income tax,
 for the year ending the 30th September last, be declared, and to be payable on and after
 the 26th instant.

The CHAIRMAN said, after the very full and ample report which the secretary had
 just read, the shareholders would not expect a very long address from him. He had
 not expected at the last meeting to be in the auspicious position which they now were.
 They had obtained the confidence of her Majesty's Government, and it was not only
 from the Admiralty, but by other parties that they were convinced of this fact. He
 never deplored the success of the company, but they now were appreciated by par-
 ties whatever politics they professed, and he was proud to say that their ship had been
 under the fire of Sebastopol, and their officers and engineers were not to be surpassed
 by any in the world; indeed, every man and boy had co-operated in carrying out the
 wishes of the Government. With such men the opposition would be carried on
 successfully until the depot was crashed. It might be asked why they now wanted
 more capital, and in reply he would state that six of their best vessels were now in
 the Black Sea, and he did not know how long they might be required. He was
 satisfied it was the feeling of every one present to support the Government, and that
 that effectively they must be prepared to make greater sacrifices than they had hitherto
 done. Before moving the adoption of the report, he was ready to give explanations
 to the best of his ability upon any point that might be required.

Mr. DENT said, as no one rose to ask any questions, he should move the adoption
 of the report, and that it be circulated amongst the proprietors. The report seemed
 so fully into every detail, that it was unnecessary for him to trouble the meeting with
 any remarks. He was glad to find that the company had earned the confidence of
 the Government, and in return they must be prepared to give the Government sup-
 port, it being their duty in a national point of view, although he had no doubt, when
 they were in a position to undertake the Australian postal contract, the Government
 in return treated them liberally. He could not do so without remarking upon the
 liberality of Messrs. Wilcox and Anderson, who would not relinquish their pay as man-
 aging directors, and hoped the shareholders would take an opportunity of marking the
 sense of obligation to those gentlemen. In conclusion, he trusted the report would
 be adopted without a dissentient voice.

Mr. NOAROS, in seconding the resolution, said it had been discussed so eloquently
 by the chairman, that he would venture to say all would cordially agree that the re-
 port deserved the united approbation of the proprietors. The directors had been
 surrounded with many difficulties, and it was only by their extraordinary zeal and
 energy that the affairs had been brought to such a satisfactory conclusion. The com-
 pany had never been so profitable, even in the worst of times, and in arranging
 the temporary pecuniary disadvantage of the company with the Government, men-
 tioned in the report, he considered the directors had adopted a very wise course,
 and should conclude by seconding the resolution, and congratulating the shareholders
 upon their present position.

Mr. NEWSON wished to know the reason the Australian line had been given up.
 The CHAIRMAN replied that the cause was fully stated in the report—so many vessels
 being required for the Government. When the present pressure was relieved, they
 might resume the Australian service.

Mr. ANDERSON said, in giving up the Australian service, they had got rid of a bad
 job, having sunk 40,000 in it. He had every good wish for the success of the Aus-
 tralian colonies, or any others, but they could not expect to be benefited at the ex-
 pence of private individuals.

The resolution for the adoption of the report was then put, and carried unanimously.

Major HILTON moved that a dividend of 5 per cent, be declared, clear of income
 tax. Mr. MULLHOLLAND seconded the resolution, which was carried unanimously.

Mr. HEARSHALL said the report reflected the highest credit upon the directors, as
 honest, sincere, and unselfish. He would move that a bonus of 14 per share
 be declared, free of income-tax, and in doing so he was bound to say, from his
 experience he had had in public companies, it seldom occurred that directors acted
 in so handsome a manner, the general plan being to take the money for such shares
 and put it in their own pockets, and it was the first time he had an opportunity of
 moving such a resolution. The resolution was then put, and carried unanimously.

Mr. DENT proposed that a committee of shareholders should be appointed to con-
 sider a suitable testimonial to be presented to Messrs. Wilcox and Anderson, the
 managing directors, and to report the same to a special general meeting. The reso-
 lution was seconded and carried unanimously, amidst much applause. Messrs. Dent,
 Norton, Lewin, Corthorn, Macpherson, Herpath, and Penny being appointed the

Original Correspondence.

THE WAR—WROUGHT OR CAST-IRON ORDNANCE.

Sir,—As old-established ironfounders, whose family have supplied the Government with guns for little short of a century, we beg you will give insertion to the following remarks, in reply to the comments in your last Journal on the continued use of cast-iron guns in the English service.

By your strictures on the Board of Ordnance, you are indirectly throwing discredit upon us, and other founders, by attributing the failure of the attack upon Sebastopol to the inferiority of the guns supplied by the English gunfounders. We would ask on what authority you feel justified in thus condemning guns of English manufacture?

If you rest your statement on the opinion put forth by Mr. Nasmyth, we would request you to re-peruse his letter to the Times, and you will find that he is condemning the use of cast-iron generally, as applied to the manufacture of ordnance, not because the cast-iron guns of the present day are of inferior quality, but because he considers wrought-iron more applicable to the purpose.

If you found your disagreement of English guns on the report of the Russian mortar gun so highly praised, we beg to say that we are prepared to supply a similar mortar to undergo the same trial. The writer of the article in your Journal is comparing a land-service mortar of 86 lbs. with our sea-service mortar of 100 lbs.—two very different things.

We maintain that English guns of cast-iron are as good now as ever they were, and as good as native English iron can make them; and, moreover, they have hitherto stood equal to all occasions.

If you will refer to the histories of the sieges during the Peninsular War, you will find that our battering trains consisted of 18 and 24-pounder cast-iron guns. Some of these guns were fired over 2500 rounds, and were still serviceable, excepting from the enlargement of the vents—an effect that would be equally produced on wrought-iron guns, and the more so when fired with the heavy charges suggested by Mr. Nasmyth.

At Sebastopol, we have 10-inch, or 84-pounder, 68-pounder, and 32-pounder guns, and we attribute our detention before that fortress solely to the numerical inferiority of our army.

You doubt whether it is possible to cast and bore guns capable of throwing shot of between 2 and 3 cwt.; and if cast, whether they could be moved by horses, or worked by human hands. We beg to inform you that we cast and bored such guns 15 years since at the same rate. They were for the fortifications of Alexandria, and we give full particulars of them, that you may know what has been, and can be, done by the gunfounders of England.

We cast ten guns—

Calibre.....	15 inches	Proof charge... 45 lbs. powder, and shell of 320 lbs.
Rough weight.....	30 tons	
Finished ditto.....	11 tons	
Length.....	13 feet	
Weight of shell 320 lbs.		Service charge 45 lbs. powder, and shot of 450 lbs.
Weight of shot, 450 lbs.		

Twenty guns—

Calibre.....	10 inches	Proof charge... 40 lbs. powder, and shot of 190 lbs.
Rough weight.....	20 tons	
Finished ditto.....	11 tons	
Length.....	12 feet	
Weight of shot, 130 lbs.		Service charge 25 to 30 lbs. powder, and ditto.

Also one mortar—

Calibre.....	20 inches	Service charge, 45 lbs. of powder, with shell of 650 lbs., containing 35 lbs. of bursting powder.
Rough weight.....	20 tons	
Finished ditto.....	13 tons	
Bed.....	17 inches	

All these guns were proved, and passed examination at Woolwich.

Therefore, we know that such guns can be made; but as to the moving or working of them, we think they are too large either for ships or siege trains, and such, we think, would be the case with the wrought-iron guns proposed by Mr. Nasmyth.

We quite agree with him as to the comparative strength of cast and wrought iron; but the question is whether there would be any advantage in having wrought-iron guns to throw shot of 2 to 3 cwt. We think not. Suppose you battered a fortress from a distance, so as to be out of reach of the enemy's fire, as he suggests, you must still have a sufficient force to take the place, or the result would be as in the case now at Sebastopol.

We can breach the place with our modern cast-iron artillery, and without very serious loss in the trenches, but we have not force sufficient to take it.

With regard to the Lancaster guns, there is a great misunderstanding on the subject. People seem to be possessed with an idea that cast-iron guns are bad because they are not quite equal to firing his shells. It is not so; but if you employ a gun (which is constructed to fire round shot of 68 lbs.) to fire the new shells, which weigh 100 lbs., it is evident that the gun will not withstand so many discharges, especially at the elevation required to get a long range. Therefore, you must either reduce your charge of powder, use heavier cast-iron guns, or employ a stronger material—wrought-iron, for instance, as Mr. Nasmyth suggests—if you can make them perfect; but you must not expect that the invention can be brought to perfection all in a moment. Enough has already been done, we think, to show that the authorities are quite alive to the subject.

There is another erroneous idea on this subject. It seems to be the opinion that wrought-iron guns, in consequence of the greater strength of that material, may be made much lighter than cast-iron guns. This is altogether a mistake; for, if the weight of the gun is not proportioned to the weight of the charge, the recoil will be so severe, that the gun would very soon be destroyed, and a great portion of the effect of the discharge would be expended on the recoil of the gun.

We were present at the intentional bursting of a wrought-iron 6-pounder field-gun, made here, and which we were allowed to send to Woolwich, for experiment, about 12 years since. At each discharge, when the proof load was 6 lbs. of powder, with two shot and two wads, the gun was actually turned upside down, the carriage being on the top of the gun, and the muzzle of the gun where the breech had been before firing. Might we not, therefore, expect a somewhat similar result when a wrought-iron gun of a weight proportioned to the charge?

J. AND E. WALKER.
Gospel Oak Works, Tipton, Staffordshire, Dec. 6.

THE WAR—WROUGHT OR CAST-IRON ORDNANCE.

Sir,—I notice in your leading article a very interesting detail regarding the manufacture of heavy ordnance, and referring to the great power obtainable by the use of Nasmyth's steam-hammer, and facility of making large articles from wrought-iron. As this subject has had a good share of my consideration, you will, perhaps, allow me to lay it before your readers in my own way.

The metals hitherto used for ordnance have been brass and cast-iron. The power of resistance which such of these metals is capable of sustaining is well ascertained; and all the improvements made in ordnance have been in a judicious distribution of the metal, so as to obtain as great an effective power as possible. I admit that very great skill has been displayed in perfecting our ordnance as it exists at present. Other metals may, however, be used for the manufacture of ordnance, and I think with great effect, particularly iron now, when all the means and appliances the nature of the ordnance should be brought forward. I am, however, very much averse to leave a system which has been so long used, and proved in our wars, happily long past, to be very excellent; yet I do agree with you that the arts have made great advances since 1815; and we have now more accurate knowledge of the manufacture of metals than we had at that period. Your remarks regarding the production of a piece of ordnance of greatly-increased power, leads me to ask, does the service really want a very light gun, combined with increased power of resistance? If a piece can be produced of very great strength, and much lighter than brass ordnance—say, half the weight—can I resist in supposing that such a piece would be very desirable and eminently useful in the present war?

I presume if a greater strength can be given to a piece—say, capable of holding an 80 lb. ball—such ball can be made to take a longer range by the addition of a larger charge of powder? If so, we only want to obtain such strength.

As regards ordnance made from wrought-iron, however well they may be manufactured, there exists, and must always exist, a serious difficulty. It is this: When a piece made from wrought-iron by welding several large pieces together has been in use for a few days, the shock given to the metal during its continual discharge will gradually disintegrate the welds. Pieces of iron such as steam-packet shafts, &c.—are subject to no such shock. A wrought-iron gun, I admit, will be made perfect in itself, and when turned and bored, apparently with no defect. It may stand several proof charges, and be sent out anticipating complete success; but when such gun is mounted in battery, and subject to a brisk firing, I much fear its weldings would gradually disintegrate, and very shortly the piece would become useless, if not dangerous. I notice Mr. Eastwood made an iron gun at the Mersey works. Perhaps you know that it burst, and sacrificed many valuable lives (I forget the particular occasion) in America.

Cast-steel ordnance, I know, has been proposed; but I confidently affirm they are worse even than wrought-iron ones. I could give you a long list of objections. Now, I propose to manufacture a piece of cannon which shall have none of the defects I have detailed to you. I propose to make it so that it shall be capable of maintaining more than three times the internal resistance of the best made piece, and, in consequence, proportionately lighter. I can make either battering cannon or mortars of any size. If the piece be required of some weight to overcome the recoil, I can give weight which may be desirable; and in doing this I give the piece an additional strength; and if the service requires the great power of resistance against the shock given by the discharge, they can give it, perhaps, he enabled to throw ball and shell to a greater distance. Now, I could prove what I say to any one so clearly that they would at once see the truth of my assertion; but I do not know to whom to apply. It is useless going to parties who have not the power to set; but if I could know whether a piece of ordnance, having the above qualifications, be really wanted, and would be useful in our present war, I would most willingly come up to London, and lay my plan before the proper parties, also such wooden models as might be required to prove what I state.

The novelty consists mainly in the manufacture of metals. I have no welding process, such as large mass of iron would have. The gun, when made, must be perfect; and I feel sure I can show that cannon so made will exert any amount of resistance.—Sheffield, Dec. 6.

THE COCAES AND GUIABA MINES.

Sir,—I am glad to find the affairs of this company again affording subject of comment in your Journal. The concern is not a bubble, and will bear out, as far as any evidence I can obtain, the character given by your correspondent. If, then, it is of the value stated, why are the shareholders in their present position? The only answer from all quarters is, the want of public confidence in the management.

Mr. Oxenford is a perfect stranger to me, and I neither charge or insinuate anything inconsistent with integrity of character. I am told Mr. Oxenford is willing to give up his management on these terms—5000*l.* down, and half the gold obtained in the future, until the whole of his claims are liquidated. Can he be serious in the proposal? Does it look like a real intention on his part of giving up power and influence? I am sure his chance of such terms is small indeed. One thing, however, strikes me in the proposal—that the interests of the shareholders are considered of minor importance. How can he hope that those who have met with so little consideration in the past will be prepared to help a management which has been so unprofitable? Whether true or otherwise, the general impression is that to Mr. Oxenford's management is to be attributed the present state of public opinion respecting the Coceas, and I am much mistaken if help of any kind can be obtained until he relinquishes the post he at present occupies. I am also assured that, were it known such a change had taken place, the value of the shares would be materially enhanced; and if the property was secured to the shareholders, and placed in vigorous hands, some-

thing important might be realised. Is it not, then, mortifying to those who have invested in the Coceas to find themselves thus deprived of the advantages they might otherwise obtain, and that Mr. Oxenford continues in the management, at the enormous sacrifice of his own interests and those of all concerned? The improved value of the shares contingent on his withdrawal would amply repay him. To me it is a mystery, not merely that the shareholders are so quiet, but that he should not at once give fairly rid of his responsibilities in something like an equitable manner.

I am no advocate for a wholesale sacrifice of the claims of Mr. Oxenford; his interests ought to be as much protected as those of any one concerned; but let Mr. Oxenford, seeing that the onus of the past and the present rests upon him, place himself upon a level with the rest of the shareholders, and submit to the fate, whatever it is, which they will have to experience. How can he hope to be paid when their shares, under his management, are reduced to 1*l.* 2*s.* 6*d.*? Can there be any hope of improvement while this state of things is perpetuated. Those who know anything respecting it must be aware that means are not available for working the properties satisfactorily: to go on as it is, is madness. To act with decision and, I may add, justice to all, must make a good thing of a property notoriously valuable, and not more than 60 miles from the St. John del Rey Mines.

Would such a proposal as the following be considered admissible, and meet the claims of all parties in an equitable manner? Let the property be vested in a trust (say) of 12 men, whose public character and standing would be *bona fide* security to the shareholders, and who should be unconnected with the management. Let a jury of 8 or 10 men of business, aided by an experienced accountant, and paid, if necessary, to receive and adjust all claims on the estates; and when their work is done, let the shareholders appoint a vigorous executive, empowered to carry out all measures necessary for the management of the property and their full development. Your correspondent of last week's Journal has given a statement of their resources, which is confirmed in other quarters, and if in accordance with facts, why should such valuable estates be thus sacrificed, and so much suffering occasioned to those who have embarked their property, and cannot sell out without entailing serious loss.—Dec. 4.

A SHAREHOLDER.

ANTHRACITE COAL, AND AMERICAN GRATES.

Sir,—I see, in your last week's Journal, a letter on "Anthracite Coal, and the Smoke Nuisance"—the contents of which are well worth attention. The American plan of grate in which they burn anthracite in the drawing-rooms of New York, Philadelphia, and other large towns of the Union, is very simple, and far more efficacious for the purpose of warming a room than anything we have in this country. Our grates appear constructed as if for the express purpose of getting the minimum of beneficial heat from the maximum quantity of coals. They are contrivances rather for heating the chimney shaft and ventilating the room, certainly not for warming it. At one time the register grate, with its iron back and sides, was in vogue. We are wiser now; and find that fire-brick is the only proper material for such positions. When thoroughly heated, it reflects a strong heat. The American grate in which anthracite is used is not sunk into the chimney; it is an open grate, set with the back nearly even with the sides of the chimney piece. Being well brought out into the room, it radiates heat on all sides; and, with a consumption of two-thirds less of anthracite would more thoroughly and generally warm a room than is at present done. The arrangement for the passage into the chimney is, of course, somewhat different from our ordinary chimneys. We may indeed take a lesson from Brother Jonathan in this, and improve largely our home comfort, getting rid of smoke and dust, the continual ringing for coals, the necessity of roasting our shins whilst our back is a prey to rheumatic blasts, besides preserving more effectually our last purchase at the Royal Academy, saving our household's time and dusts, and considerably curtailing our landlady and coal merchant's bills. Your correspondent makes some remarks on the quality of American anthracite. I have seen most sorts of their coals and of the Welsh anthracite; and without prejudice can say that the best quality shipped from Llanelly, in Carmarthenshire, and Saundersfoot, in Pembrokeshire, is fully equal to the best American. There is, however, some very inferior; but by going to respectable dealers, purchasers may insure a good article. If your correspondent's letter should have induced any parties to turn their attention to the subject, by applying to Messrs. Jones and Sells, of Bankside, who I am aware are the agents for the best coals from those ports, they would not be disappointed. I could then see that there would be no necessity to send to America for coals; the coal to which he would find at hand at a much cheaper rate. In 1820, the total consumption of anthracite throughout the United States was 365 tons; in 1832 it was 5,319,941 tons.—*Llanello, Dec. 6.*

ANTHRACITE COAL, AND THE SMOKE NUISANCE.

Sir,—I read an article in your last week's Journal, signed "Londoner," on Anthracite Coal, and the Smoke Nuisance. I was much pleased with his observations, and can vouch for the truth of what he says relative to the use of anthracite coal in the great cities of the United States. There is one thing, however, in which he must stand corrected—viz., that the Americans at first used the anthracite coal in preference to bituminous: 26 years ago anthracite coal was slowly introduced into Philadelphia. The bituminous coal mines, at that time, were no advantage to the north, in consequence of the want of means of transit. The nearest, save those on the Ohio River, and the James River, above Richmond, Virginia, little of which found its way to the north. The principal cause used for smiths' purposes being from Great Britain and Nova Scotia.

As I was a resident in the United States at that period, and felt much interest in the use of this coal—and I may say, with truth, that I had much to do in its introduction—it may not be amiss, in as brief a manner as possible, to describe to your readers how simple the means were that overcame seeming difficulties, and that step by step anthracite has become in that great country the universal fuel for almost every purpose; and, although they now are enabled to bring an abundance of other coal into the market, yet but for us it.

I would say that, after several years of trial, one important fact presented itself, which was to break the coal, and screen it into uniform sizes, adapted to its various uses; the largest being what they term egg size; the 2d, nut size; the 3d, pea size; and, lastly, dust: they are all known in the market under the above terms. The egg size is used for open grates, the construction of which differs somewhat from our English grate, the bars being placed in a vertical position, and curving under; they are thin, and placed close together, allowing only about one inch between each bar. The throat of the grate is not immediately at the back of the grate, but above and a little forward, so that the air does not pass over the top of the grate to cool it; by this means it is forced through the fuel.

Another great fact to be observed is, *not to use the poker*; merely riddle the dust with a thin piece of iron from between the bars about three times a day, feeding it at the same periods; thus you have a good clear fire, preferable to the bituminous coal, provided we can rid ourselves of prejudice. The second, or nut size, and also the third, or pea size, are generally used in parlour, office, or cooking stoves, for which the Americans are unrivalled: the form of grates is similar to the one just described, taking great care that no air enters through the fuel.

The nut and dust sizes are used under stationary steam-boilers, and require a fan blast, as the particles lay close together, it is difficult to get the air through; this should be laid in thin strata, not more than 3 to 5 inches thick, and kept alive by the fan, when it will burn well, and is found to answer for stationary steam-engines.

In the many attempts at first made to burn it in marine boilers, it was taken up, and abandoned again and again; and it was for years considered a problem not solved. Some supposed it wanted a greater area of fire-grate than was used for wood. Others fed it through hoppers, and uniformly all over the surface, increasing the draft in the best way possible, either by lengthening the chimney or using a fan-blast. All these difficulties passed away, without any material alteration to the boilers; it merely rested on the manner of igniting the fuel, giving it longer time before starting, and doing away almost with the use of the poker.

I have frequently travelled 65 miles on the Hudson, from Newbury to New York, without the engineer feeding the fire the whole voyage, with only one stoker to the boat, and he amusing himself with the newspapers the whole journey, with his face as clean as that of the captain's. It is at present universally used for both sea and river steamers in that country.

In introducing it to the melting of iron in the ordinary cupola, there was seemingly much to contend with. It was first used as a mixture, either with coke or charcoal, and for some years this was the way in which it was used; but by charging the furnace more uniformly with alternate layers of coal and iron, and allowing it more time to ignite before applying the blast, the whole difficulty was overcome. There is not a founder in the northern towns or cities but uses it exclusively as a fuel for melting of iron. The construction of the cupola, and the application of the blast to the fuel, is somewhat different; but it can be used in any cupola.

To all the purposes of smelting iron from the ore, puddling, re-heating, melting in the cupola, and even the common smith's forge, do they use this fuel in preference to any other, although they have now an abundance of other coal, quite as good as any in Great Britain.

From common calculation, it is supposed we have anthracite enough for a thousand years' consumption in South Wales; and it only wants a little perseverance, with less than a little of prejudice, to ensure success in its adoption to any and every purpose where bituminous coal is now used; and would prove a great boon to our country.—*Barnbury, Dec. 6.*

P. R. H.

KENMARE MINING COMPANY.

Sir,—Having seen some remarks in your Journal of the 25th Nov. respecting the late manager of the Kenmare Mine, I have to request the favour of your inserting the following statement of the mine, which will be brief as possible. In August last, at the half-yearly meeting, the mine was reported to be in a prosperous state, with ample and complete machinery, and that the proceeds of the next six months' working would, after paying all expenses, leave a profit; that no call was necessary for carrying on the operations of the mine, and Capt. Skimmings said the mine was in a healthier state than since the commencement. So far, all was highly satisfactory. But, lo, and behold! On the 7th Oct., only two little months, it was discovered that the mine was in debt to the amount of 1800*l.*, and a call of 3*s.* per share found absolutely necessary to carry on the mine! The call, however, was not responded to, although one of the directors stated, "That during the past three months, since Capt. Skimmings had had the management of the mine, the ore had increased in quantity, and quality, while the cost had not advanced in proportion; that Captain Skimmings estimated the returns at 40 tons per month for six months, which would go far towards payment of cost, after which period the quantity might be doubled."

At the meeting on the 25th Nov., it was stated that the debts amounted to 2000*l.*, and Capt. Skimmings said "Had only taken the management of the mine since June last. They had a great deal to contend with, the late manager having thrown every obstacle in their way; in fact, a perpetual under-current working against them. In the month of Aug. they had raised 45 tons of ore. At that period their finances were stopped, and since then they had made no progress. If the mine had been judiciously carried out, he had no doubt it would have proved a profitable one. He had wished that the call of 3*s.* per share had been paid." So much for assertions. But let us come to facts. From June to Nov. the quantity of ore raised is 60 tons, which will probably realise a nett sum of about 250*l.* About 140 tons of halva and rubbish have been scraped up, which will not pay the cost of collecting, carriage, and freight; 45 tons of ore (rubbish is not ore) were not raised in August, nor half the quantity, but the cost of that month, with the mine in full course of working and perfect machinery, exceeded the cost of any month since the mine commenced. Whereas, in the month of May 73 tons were raised, and after erecting proper machinery and laying out the necessary works, if I had been allowed to carry out my own arrangements, I would have successfully worked the mine.

With regard to Capt. Skimmings' remarks, about my throwing obstacles in the way of working the mine, perpetual under-currents, &c., the mildest term I can use is that his assertion is a falsehood, and I defy him to prove the truth of a single word contained in his statement. If he had told the directors on the 12th Aug., 7th Oct., and 25th Nov., that he did not know what he was about, and had either ignorantly or wilfully deceived them, all would have been more like truth. I am willing, however, to put the most charitable construction on his doings, and attribute his errors to ig-

norance and want of judgment, rather than a wish to deceive, because when a man reports favourably on a mine, and purchases shares in proof of his good opinion of the concern, and mistakes grey ore for powder smoke, as recent results indubitably prove, the ores being soon set, it is not a matter for wonder that Capt. Skimmings should have floundered in the mire of Kenmare.—*Kenmare, Dec. 4.*

W. THOMAS.

MINING TERMS, AND IRISH MINES.

Sir,—I am sorry to have again to trespass on your paper, but I hope your Dublin correspondent's appeal, in last week's Journal, will be a sufficient excuse for my doing so. First, as to "quartz and quartzite." When I spoke of the latter as being the "quartz of mountain masses," I did not mean the quartz of *lodes, veins, &c.*, in those mountain masses or formations, but the formations themselves, where they were either altogether and entirely solid "quartz rock," or where they were formed of beds of that substance, interstratified with the slate or other rock occurring with it. Here, of course, the presence of "quartz" would be no proof of the existence even of a lode, much less an indication of a metalliferous deposit. Quartz, however, properly so called, as I apprehend it, is that occurring in lodes, veins, and strays, or feeders, which may be found in slate, granite, limestone, porphyry, "quartzite," or any other formation. Such quartz has been deposited in these lodes (which were at one time cliffs in the rock), long subsequent to the deposition of those formations themselves, and it is, therefore, of a much later, as well as of a very different, origin from the formations those lodes are found in. Its silica may certainly have been derived from the country around, and, no doubt, generally was so; but that does not prevent its being a later deposit, and, therefore, having a different origin. The one, for instance, in the case of slate originated in a watery deposition of mud, afterwards hardened into stone, occurring on a great scale, and extending over whole districts. The other was confined to cracks and clefts in the solid rock, which were filled up by chemical and electrical depositions or sublimations. I consider that I am, therefore, correct in stating that they are perfectly distinct in their origin.

And now as to the extensive districts in West Cork, to which your correspondent alludes. I have only to repeat that, although I may have expressed an unfavourable opinion of a particular lode in one of them, I never thought of condemning any whole district. The evidence for or against a particular mine, or lode, must be chiefly dependent on its own particular indications, which do not, of course, condemn any other lode in its neighbourhood. There may be bad and unproductive lodes as well as good ones in the same identical district. In fact, in no extensive district can we expect all the lodes to be productive, and in many instances the same lode will be found rich in metalliferous deposits at one place, and at a considerable distance off poor and unproductive. But it would require a volume from me to go into the subject fully, so I must stop. I will, however, just add that I have no hesitation in saying, from my knowledge of the district to which your correspondent alludes, that there is a very great similarity between them and the country lying to the north as far as Berehaven and Kerry, and no man can fairly condemn any portion of it, or say that in any one part as good mines may not yet be found as have been already found in another. It may not be very likely that a second Berehaven will be discovered, though such a thing is by no means impossible; but, at all events, many mines may be found throughout it that might be very profitable concerns, without being exactly equal to Berehaven.

I have now to conclude, by thanking your correspondent for his courteous mention of me, and will say, if he will, that I have, at my office, he can see some specimens quite *appropos* to our discussion, from a mine lately discovered in the county of Mayo, which is now being tried, and which I hope bids fair to be a paying mine before long, and to take an important position in "his articles," which I can assure him will not be the least interesting parts of the *Mining Journal* to me during a short residence which I am now about to make in the south of Europe; thus, for the present, absents myself from our home and more familiar fields of mining enterprise, with most of which I have been hitherto so intimately connected or acquainted, that I shall, of course, always feel deeply interested for their progress and success.—*Henrietta-street, Dublin, Dec. 5.*

R. W. TOWSEND.

CRADDOCK'S ENGINES.

Sir,—Mr. Craddock's immediate reply to Mr. Bennett's exposition was what I expected, and the refutation is as precise as my previous knowledge of his accuracy led me to believe I should hear; but I grieve to find that he is still pursued by that simulated friendship which has been so extraordinary a feature in my acquaintance with this scrupulous business.

Of the various points in dispute relating to mere circumstance, and of the contradictions to Mr. Craddock on the details of the engine, I shall say no more than this:—When opposite assertions proceed from two persons—one entirely a stranger, the other well known for minute and tried veracity, the balance of belief must preponderate in favour of the latter. And it is no unimportant trait, as affecting these differences, that the fact which is of as much consequence as all the rest together—the corrosion or destruction of the substance of the cylinder facing—is entirely passed over by Mr. Bennett.

Mr. Craddock justly remarks, a comparison of the duty of an engine leaking at the valve and in the boiler, with engines in perfect order, would be an absurdity. But though Mr. Bennett drew no line between the duty of the periods when the engine was perfect and imperfect, yet I was bound to suppose, in fairness, that he had made the distinction, and given his comparison from data when the engine was able to do its duty, not when it was unable; and I passed on to the important inference from his letter, that it was an essential quality in the performance of these engines at the date of his testimonial to grow leaky in a few months. I have now the further facts, that in working an engine whose economy is based on a high development of the expansive principle, the steam was generated at some little over 20 lbs. pressure; and also that this miniature model, as I conceived it must be, of 1½ and 8-100ths horse power, was actually at the least 30-horse.

This being a very important subject—more important a hundredfold to the civilised world than all the subjects together which are debated in our scientific associations—I must beg to trace a brief recapitulation. During three years I have done my utmost to obtain notice for these inventions, and have denounced in the most intense terms I could collect the apathetic treatment of them; and what is far worse, the inveterate or recalcitrant opposition which I have had the pain or exasperation in detecting the anxiety of opposing parties. Here was a pretty mess, when a few simple figures came out to dispel so grand a delusion! For even had I been arguing on a correct principle, there remained a little more to be done than I had indicated in perfecting its application, if the "exquisite machines," as I had termed them, could not work above four months without coming to pieces, and when they did work did nothing worth doing. It was high time, in such a pickle, to become "neutral"—if I could. Short notices of the erection and progress of this engine had appeared in your pages from time to time, and, for aught I knew to the contrary, the statement of duty, when it came forth, was the fruit of a patient, deliberate experiment, through an adequate period, superintended and attested by Mr. Craddock himself, and conclusively representing before the world the degree of perfection to which these inventions had now been brought, proving at least, if not that they were worthless, that a very long course of improvement had to be seen to, before they could ever approximate to the condition of my daring eulogies and predictions. Therefore, to take time by the forelock, I set earnestly to discover where my prodigious errors had been concealed. As the valves could hardly have leaked directly they were fitted, and the boiler also, there must be something else the matter. After deducting from the fuel consumed the quantity of heat lost by radiation or absorbed in flues, and which even in the worst construction, can amount but to a tolerably insignificant fraction, there remain but two ways in which the heat generated under a steam-boiler can be got rid of—to wit, it must either go off in the steam, or go off up the chimney. Except the coal were burned without producing heat, these alternatives were unavoidable. As Mr. Bennett's figures gave less than usual to the steam, more than usual must have gone up the stack. The form of Mr. Craddock's boilers being such that it is hardly possible for any material amount of heat to get so far, never, in fact, to my knowledge having been in the habit of such extensive and expensive travelling, I was quite put in mind of the substantial or rational opposition I could fall on to that possibility, for some reason or other, the fire might have been so urged as to force the coal to go up the chimney. I had very early discussed with Mr. Craddock the possibility of some such conditions, in some cases, making it necessary to adopt that form of his invention which repeats the boiler power in the flue, for the more complete exhaustion of excessive heat generated on the grate, by which alone the excessive waste in Mr. Bennett's figures seemed explicable. It was worth enquiry. It is true, Mr. Craddock had given me conclusive data that the single boiler was sufficient for all ordinary cases, but here were all previous data and information turned upon their heads, and a statement which in the absence of knowledge to the contrary I was bound to assume was well digested, fairly meant, and faithfully given, to which belief I was the more disposed from a vague recollection that Mr. Craddock had at some time given me a favourable mention of Mr. Bennett's name. I am sorry indeed to learn from Mr. Craddock's conclusive reply what a different spirit has been at work. Though well pleased to find all previous facts and opinions confirmed, it is painful to see *how* their invalidation has been attempted. I was astounded to hear of the leakage of the boilers, after the complete evidence I had of this difficulty having been conquered; and I could refer to nothing in point but the leakage of the first boiler made, with tubes of a highly expansive and contractile metal, and before that compensation was devised which Mr. Craddock describes. But it seems the leakage is not with the tubes at all, whilst the two letters printed together prove the accuracy of the inventor in suggesting where and how the leak might possibly arise. Instead of this accident being incidental to the *tubular boiler*, as was the inference from the unexplained statement, it is, it now appears, even if the boiler had fair play, nothing but imperfect rivetting of common plates, which might occur in a common boiler, much more in these small connecting chests, where rather more attention and nicety is required than with a Britannia tube to rivet.

The leakage of the valves was inexplicable upon any consideration I could devise. A new valve was not enough; the iron face of the cylinder required planing, and I, therefore, asked if this engine had the peculiar property of reversing the usual action of brass and iron. Mr. Craddock's explanation is more than sufficient; I need not, therefore, discuss the new problem in physics suggested by Mr. Bennett as a probable cause.

The pains taken to confute a general remark upon engines from "50 to 300-horse power," by an elaborate calculation that the Wheel Work engine is only 312, speaks for itself.

Assuming it correct that the majority of Cornish engines are working at half their nominal power, why did not Mr. Bennett work his engine to half its nominal power before he made a comparison, which no one could have expected to hear was based upon a minute fraction, not one-twentieth part of its capacity? There can be no question whatever that the two cylinders he describes are capable of 40-horse power with that pressure of steam for which the boilers are intended. Yet he gives the engine such a trifling load, that imperfect as he would represent the evaporative power of the boilers to be, they do so much more than is required, that the fire-doors were actually thrown open to keep down the steam. Mr. Craddock may well ask if the

Mr. HACKETT said he had hitherto received with some caution the good news of the coming of the new machinery. He had, however, since the evidence had received from so many impartial sources had convinced him of the worth of the property; and he thought they could not, in justice to their own interests, longer hesitate to take measures for returning the are already in sight.

Mr. GIFFORDS asked what sum was likely to be required for the proposed stamping machinery.

That depended upon the opportunities we have of purchasing it second hand. Mr. Hackett had suggested that we might possibly find it advantageous to purchase a more powerful pumping engine, and appropriate our present one to stamping purposes. This was a suggestion worth considering. If, however, we offer of second-hand stamping machinery very cheap, the committee might prefer

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In the 25, driving east of the water-wheel shaft, the lode is 2 feet wide, low priced stamping work; driving by four men, at 70s. per fathom. In the western end of this level the lode is 2 ft. wide, and improving; driving by two men, at 70s. per fathom. In the 26, driving east of south shaft, we have done but little, as the men therein employed have been opening a flat for our new water-wheel stamp; therefore, we have made no alteration since our last report; now driving by two men, at 40s. per fathom. In the west end of this level we have been cutting through the lode, which is 3 ft. wide, 1 ft. of which is of good quality; driving by two men, at 60s. per fathom. In the 27, driving east of Wheel Ash shaft, the lode is 3 feet wide, and of good quality; driving by two men and two boys, at 70s. per fathom. In the western end of this level the lode is 18 in. wide; it is at present disordered by a small cross-course; previous to the intersection of this cross-course the lode was worth 10s. per fathom, and as soon as we set off from it a little, it will, I hope be as rich as before; it is driving by two men and two boys, at 40s. per fathom. We purpose rising behind the end east of this cross-course by two men, at 30s. per fathom. The stope is just as they were when last reported—worth 8s. per fathom; stopping by three men, at 40s. per fathom. The tribute department is looking well. The ore sold on the 1st inst. realized 75s. 6d. Nothing new in the Wheel Ash shaft; it is clearing by two men and two boys, at 5s. per fathom. We hope to set the water-stamps to work in about three weeks from this time.—W. TAYLOR: Dec. 4.

QUEEN OF DART.—The cross-cut in the 10, at the engine-shaft, is being driven steadily; the men have sent up some beautiful stones of yellow copper ore, although they have not reached the lode; there can now be no doubt of this rich lode holding good in depth, with such indications as these afford.

BORTRIDGE CONSOLS.—Eastern Engine-shaft. The western end in the 30 fms. level is driven about 7 fathoms; the lode is much as usual, and is not so good as when last reported, worth about 1 ton per fm., still a very beautiful looking lode. In the eastern end, the lode has not been taken down this past week, still we can see ore as we pass along by the side of it. The stope in the back of the 20 are not quite so good, worth about 3 tons per fm. At Hitchins's shaft there is nothing new. We sampled, on Friday last, (computed) 60 tons; we could not get all the ore to the quay through the scarcity of wagons. We have commenced to take out the ground for the foundation of the engine-house, also commenced to raise stone for the same.—Dec. 7.

SOUTH GREYER.—The flat-rod shaft is sunk 6 fms. 2 ft. below the 94—ground rather harder than usual, and the lode improving in appearance; it is set to eight men, at 25s. per fm. The lode in the 74 east is 18 in. wide, with stones of ore; set to four men, at 12s. per fm. The lode in the 64 east is 2 1/2 ft. wide, and will yield 2 tons per fathom, worth 10s. per ton; set to six men, at 10s. per fm. The lode in the 54 east is 1 ft. wide, improving in appearance; set to four men, at 10s. per fm. The stope generally are looking well. We sampled on the 28th Nov. 168 tons, for five weeks' dressing.—T. RICHARDS: Dec. 1.

SOUTH DEVON GREAT CONSOLS.—There is no alteration worthy of remark since last reported. Our operations are at present confined to sinking the engine-shaft below the 30, and driving a cross-cut in the adit level, both of which are progressing favourably.—J. COCK: Dec. 7.

SOUTH TOWY.—The lode in the mine sinking under adit is 3 ft. wide, composed of floozan, spar, and some stones of lead.—W. H. REYNOLDS: Dec. 2.

SOUTH WHEEL TOLGUS.—Yoursen's lode, in the 78 fm. level, is not looking quite so well; the lode is 10 in. wide, yielding saving work; the south lode, in the 78 east, is looking more promising, but not yielding sufficient to value. The lode in the rise shaft is still unproductive. The lode in the 20 fm. level, west from ditto, is looking much better, and is producing some good work. The 30 fm. level, east from Morcom's shaft, is looking kindly; the lode is increased in size, and is letting out a great quantity of water, but not yielding any ore to value. The lode in the adit level, west of north shaft, is looking promising, and yielding some good stones of ore.—Dec. 2.

ST. AUSTELL CONSOLS.—Our shoot of nickel is continuing in depth, and improving as we go down. Our tin ground at present is sufficiently encouraging to carry on the mine of itself, and with a separate stamp from our drawing-engine, at least 4 tons of tin per month could be returned. Our cross-cut north in the 35, at Young's shaft, will soon intersect a lode of great promise, and many other points are being proved that I believe will be very remunerative.—H. H. WILLIAMS: Dec. 7.

STRANFORD.—South of shaft: We have driven the 10 fathom level in the past month about 2 fms., at 4s. 10s. per fm.; this end being advanced beyond the range of the stope in the back of the level, and being moreover unproductive, I thought it best to suspend the driving; which having been done, the men are now engaged stopping.—No. 1 stope, joining the south end of shaft: Here the men have stopped about 3 1/2 fms., at 5s. 5s. per fathom, with the usual amount of produce—that is, about 15 cwt. of ore per fm.; prior for the present month, 3s. 10s. per fm.; the prospect of this place is not quite so good.—No. 2 stope. Ground stopped for the month, 3 fms., at 4s. 10s. per fm., the lode producing full 1 ton to a fathom, and continuing at this time without alteration.—North of shaft: The men have spent about 2 1/2 fms. of ground, at 4s. per fathom; just the same in produce as before observed, and is set at this time to four men at the same price, with similar prospects. In looking at the different places, I beg to observe that as we get nearer to the surface with our various stope and risings, the lode does not appear to be so good. I also would state that in some of our places we are not more than 3 or 4 fms. from surface, and over which parts the tide regularly flows.—Dec. 1.

TAMAR MARIA.—Since my last adit cross-cut has been driven south about 6 1/2 ft. We have no appearance of the lode as yet. I think the main lode is still in advance of the present end, and the ground is much the same as when last I wrote you, but my frank opinion is that it only requires a little time and perseverance to lay open a good mine.—J. HOPKINS: Dec. 6.

TEES HEAD CONSOLS.—No material alteration has taken place in the driving of the new adit level since my last report. The strings of spar and ore in the sill, as well as ore lying on the sill, still continue.—T. DICKINSON: Dec. 4.

TEES SIDE.—I have nothing of importance respecting the appearance of the mines to note this week, the late inclemency of the weather, with much frost and snow have much retarded our operations underground, as well as at the surface, but I think now we have a change for the better. The 24 fm. level still looks well, and soon will be worked to advantage. We are getting a fair quantity of ore from the rises and stope in the back of the adit level at Metal Bank.—J. COLLIER: Dec. 1.

TALIESIN SILVER-LEAD.—I am sorry to inform you we cannot dress the quantity of ore this week, because we cannot have it crushed. We are dressing as fast as the engine crushes it; we shall crush day and night this week. We can sample 30 tons at the end of this week, if it meets your approbation. I advise you to sample that quantity, and have a cargo of coal to come back; by that time we shall have dressed another 30 tons. I hope we shall have the next 30 tons sooner than this, because the time will soon be helped. We have got piles broken for the crusher for a month or more. I do not think we want another dresser, because one will crush as much as the engine can crush.—W. WILLIAMS: Dec. 4.

TAVY CONSOLS.—In the 68 north the floor-spar is increasing in size, being now full 4 ft. wide, and of the same character as in the past three weeks. The 36 east we have been dressing the lode for the last week, but the lode is not yet taken down. The 46 east is without alteration since last report. The stope in the back of the 46 are producing good work. In the 36 west the ground is very favourable for driving; we shall soon get to the cross-course, when I hope to discover the main lode west. We weighed off on the 1st December 61 tons 7 cwt., sold on the 23d Nov., and are preparing for December sampling.—W. Goss: Dec. 4.

TRANNACK CONSOLS.—No particular change has taken place in the western cross-cut, nor on the north lode, since last report. The eastern cross-course, which is 2 feet wide, and mixed with native copper, is more favourable for driving than it was on survey day; the men are pushing on steadily, at the rate of 2 fms. per week.—J. BERNARD: Dec. 5.

TREHANE.—The lode in the 124 fm. level north is 3 ft. wide, worth about 5s. per fathom; the stope in the back of the level, north and south of the shaft, is worth average 7s. per fm. In the 112, north of shaft, the stope is worth 17s. per fm., the stope in the back of same level south are worth 15s. per fm. The stope in the back of the 100, both north and south of the shaft, continue to produce on the average 16s. worth of lead per fm. The pitches are without any important alteration since last report. In the adit level, driving west, we have in the past week intersected some small branches containing quartz and gossan, which look more promising for nearer a lode than I have seen in the last 6 fms.—ground favourable for working. In the northern level the branches are still running regularly, but varying from 1 in. to 6 and 8 inches in width, composed of quartz, gossan, and mundle.—S. RICHARDS: Dec. 4.

TRELIUGH CONSOLS.—The ground in Carr's engine-shaft continues good for sinking, and the men are getting fair wages: rich stones of ore are frequently found in the stratum by quartz. The massive lode has been driven down, and is building the stack during most of the past week, in consequence of successive days of heavy rain. The engineers are heaving in the heavy work of the engine. At Christie's shaft, we have drawn up the lift of pumps from the 100 to the 110 fm. level, which, together with other spare pitwork, we purpose to offer for sale by private contract in course of the ensuing week.—JOHN FAIRCE: Dec. 2.

TREMOLLETT DOWN.—The lode in No. 4 level, going south, is 3 ft. wide, composed of floozan, quartz, and white iron, intermixed with lead and copper ore, a very promising lode indeed. I hope that the adventurers of this mine will not lose sight of sinking a shaft to prove these lodes at a deeper level. I hope the engine and materials that are for sale at Devon Consols will be bought in for this mine. The ground in the cross-cut is a little improved, with a quantity of water coming from the ground, probably from getting near the lode.—J. RICHARDS: Dec. 2.

TRENOW CONSOLS.—Since last report the shaftmen have been easing and driving the shaft from the 30 to the 50 fm. level, and we expect next week to drop our 15-in. lift to the 60 fm. level. On Saturday last, our pay and survey-day, we set the following table:—Smith's engine-shaft to sink under the 30, by eight men, at 8s. 10s. per fathom; the 36 to drive east from Hill's shaft, on the tin lode, by four men, at 6s. per fathom; the 30 to drive east from Hill's shaft, on the tin lode, by four men, at 6s. per fathom; the 40 to drive west of the engine-shaft, by four men, at 5s. per fathom. There is a great improvement in this level since last report; the lode is 2 1/2 feet wide, producing excellent stones of copper ore; and from the present appearance we are not far from a good bunch of ore. The 36 to drive west of the engine-shaft, by two men, at 4s. 10s. per fathom; the lode in this end is 2 ft. wide, and has a very promising appearance; a winze is being sunk under the 30, west of the engine-shaft, by four men, at 3s. 10s. per fathom; this winze is producing good stones of tin; in the tribute department, a pitch at Hill's shaft, at the back of the 30, east of Edmond's rise, to four men, at 11s. 1d. in 11; a pitch in the back of the 30, east of Edmond's rise, to two men, at 11s. 1d. in 11; a pitch in the bottom of the 30, to four men, at 6s. 8d. in 12; a pitch in the back of the 20, to four men, at 11s. 1d. in 11; a pitch in the back of the 20, west of Hill's shaft, to two men, at 13s. 4d. in 14; a pitch at Lyles shaft, in the back of the 20, to two men, at 13s. 4d. in 14; a pitch in the back of the 50, west of the engine-shaft, to two men, at 13s. 4d. in 14; a pitch in the bottom of the 40, west of the engine-shaft, to two men, at 13s. 4d. in 14; a pitch in the back of the 30, west of the engine-shaft, to two men, at 13s. 4d. in 14. On Tuesday last we sampled 227 sacks of tinstuff, which will be ticketed for by the bargain-buyers on Tuesday next. All our operations are going on well. We anticipate seeing the 60 ore long, when we hope to have the pleasure of reporting favourably as to it.—J. CARTER: T. SMITH: T. BERNARD: Dec. 6.

TREWETHA.—The pumping-engine started to-day, in first-rate style, and thus far is working exceedingly well. In the 30, north end, the lode is not so good as last reported, in consequence of the intersection of a slide, which has disordered it in this place, but I do not expect it to be of long duration, as we have had similar occurrences before. The lode in the 20, north end, is looking about 6d. The stope is being worked by much as usual. We sampled yesterday, computed, 22 tons of ore, to be sold on the 14th of this month, and I calculate on sampling again at the end of this month 24 tons. The drawing-engine is ready, and will commence working as soon as we can get up poppet-heads, pulley-stands and pulley, &c., so as to connect the drawing department to the engine.—W. ROWE: Dec. 6.

VALE OF TOWY.—The 30 fm. level, driving south of Clay's engine-shaft, has in the past week produced 3 tons of lead per fathom. We have holed the winze from the 30 to the 30 fathom level, and the men are now stopping down the lode to the bottom of the level, which is 2 1/2 feet wide, composed principally of barytes, with spots of lead. In the 20 fm. level, driving north, the lode is 3 feet wide, and produces 1 ton of lead per fathom, driving in the bottom of the 10 fm. level the lode is 3 feet wide, producing stones of lead. In the 10 fm. level, driving north of Bonville's shaft, the lode is 18 inches wide, producing a small quantity of lead. At Field's shaft, the men are securing pit in the 10 fm. level.—S. THOMAS: Dec. 6.

WEST BASSET.—North Lode: The part on which we are driving the 94 east is worth 1 1/2 ton of ore per fm.; a stope in the bottom of the 54 produces 10 tons per fathom. In the 84 east the lode is 4 feet wide, very kindly, with good stones of ore. The 43 east produces 3 tons, and the 30 east 1 ton of ore per fm.—Engine Lode: The 30 east and the 20 east will each produce 2 tons per fm.—South Lode: The lode in the 43 east is 2 1/2 feet wide, worth 4 tons, and the rise in the back of the same level will turn out 5 tons of ore per fm. At this point, where Thomas's engine shaft is holed about 9 ft. above the 43, a lode was intersected, which has this week produced some extraordinary stones of yellow ore; a specimen of two Mr. Lyle will be able to show when he comes to London. I believe this will, after awhile, prove a very important discovery. The lode is about 5 fathoms north of our present workings.—W. ROBERTS: Dec. 2.

WEST DING DONG.—The lode in the 30 fm. level, west of the engine-shaft, is more promising than that in the end going east, but from some cause, most probably the reason assigned on more than one occasion (the hard state of the ground), it does not produce the mineral we have hitherto anticipated. In the 10 west we have followed the lode through the cross-course, and are about pursuing it in that direction on the north end, which has the appearance of a lode, although the same, and in future it will be just as well to distinguish it by that name; its width is about 8 in., and the quality not much over that of saving, but its feature, however, is altogether that of a tin lode. At Ennesteven, the lode in the winze under the 27 maintains its size and value, has yielded a little over our calculation, and is now worth from 24s. to 26s. per fm. More would have been done in the level under, but the ground being costly, I think we might just as well wait the winze being sunk through, which will enable operations to be pursued more correctly, and drivings not made out of the way. At Derval, we have two pitches being worked on tribute (shallow), at 10s. 6d. in 11, but whether upon the lode driven on in the 101 am not prepared to say, but am more than full of opinion that eventually it will be found to be the same.—T. TREVASK:

WEST PAR CONSOLS.—We have driven the north cross-cut about 10 fms.; the ground is easy for driving. We have driven on the lode east about 2 fms., and have had a good branch of ore for that length; it is now divided by a small cross-course, but we hope to have it again in a few days.—T. FLOYD: Dec. 6.

WEST SORTIDGE.—The lode in the adit level is at present small, but carrying a little tin. In the 10 fm. level, driving east, the lode is about 2 ft. wide, producing saving work for tin. In the 10 fm. level, driving west, the lode is producing good stones of tin, but not rich, taking it as a whole. There is nothing as yet cut in cost.—J. PAYOR: Dec. 5.

WEST WHEEL JANE.—The engine-shaft is sunk about 6 feet since our last report; the ground is more favourable for sinking, but the water is increasing. At Tipple's shaft, in the winze sinking on the lode in the bottom of the 30 fm. level, we are down to the water, and we cannot sink further at present; the lode is just as last reported, we have put the men to drive east on the lode in this level. At Jones's shaft, sinking below the 30, the lode is still composed of mundle; the ore is going east the level under the same. The winze in the 20, at this shaft, sinking to communicate to the 30, at Tipple's, is still poor; the cross-cut going south of this level we have suspended, and have put the men to prepare for working at Beecher's. The men from the foundry are putting in the additional stamps; heads; it is expected they will be complete in a week. The tribute department is not looking so well as it has been, the quality of the stuff is not quite so good. Tin sold this day, 2 tons 1 cwt. 1 qr. 18 lbs., at 61s. per ton, amounting to 126s. 6s.—J. DANIEL: Dec. 2.

WHEEL ARTHUR.—North Lode: The lode in the 50 west is 2 1/2 ft. wide, yielding stones of copper ore. The lode in the 35 west is 4 ft. wide, worth 20s. per fm. The lode in Knight's stope in the back of the 30, west of Palmer's winze, is worth 14s. per fm. The lode in Joryett and Bunt's stope in the back of the 30, west of the 35, is worth on an average 12s. per fm. A winze is set for four men to sink below the 35, west, at 3s. per fm. about 16 fms. beyond the 30 west.—Old Lode: The engine-shaft is down about 4 fms. below the 90 on the course of the lode, which is yielding stones of copper ore, set to nine men, at 22s. per fm., one month's stint. The 90 east is unproductive—ground moderate, water more plentiful. Six men are driving north from the machine-shaft, to cut the wheel-pit lode, and which we expect to intersect by the end of the month. We sampled November ore on the 1st inst., computed 229 tons, much better quality than the last.—T. CARPENTER: Dec. 4.

WHEEL CREBOR.—Yesterday I sampled our ore for September and October, which is 72 tons (computed), weighed at the mine 71 tons 18 cwt., and divided at Morwellham 71 tons 20 cwt., the samples of all the parcels were assayed next week, the result I will write you when I have the produce. The rise in the back of the 34, lode to have communicated next week, although the ground is not so good for rising as it has been. The Great Bucktor lode is not yet cut through; it is large, strong, and ore as far as yet seen, a very great improvement; and there is not the least doubt of good and lasting results ultimately, and not far distant. To-day I have been in the 44 west, and let the level to clear to end, it being about 25 fms., at 2s. bargain, to have 13s. 4d. in 11. For what ore they can get for the month; if this level had been clear I could have let it at less tribute, but being for one month it will be a short taking for them, I can see ore on the lode through the driving. The 44 east the lode in the end is large and ore, improving very fast; we are driving a very promising lode. The pitches in general are looking tolerably well; several of the tributaries have been driving cross-cuts to intersect other branches of lodes, risings, &c., to make these pitches more convenient. While this has been doing it has in some degree retarded our sending up so much ore as otherwise we should, but no doubt I shall send up a good sampling again in time.—W. DOBLE: Dec. 2.

—Our setting on Saturday, the 25th of November, was as follows:—The rise above the 54, now known as North's rise, by six men, stented to hole 4 fms., at 5s. per fm. The 44 east to drive east, by six men, stented 3 fms., at 5s. per fm. A pitch in the bottom of the 44, east of Carlin's shaft, for two months, at 12s. in 11; the man in the pitch before I discharged for bad conduct. A pitch in the back of the shallow adit, by one man and one boy, at 12s.—W. DOBLE: Dec. 2.

—The lode in the 44 fathom level end east is still improving. The rise in back of the 54 fm. level east will be holed in the course of a week, which will ventilate both ends, and enable us to drive them on with greater speed, and then there cannot be much doubt of good results. I have set the 44 west to clear, being driven upwards of 25 fms., on a strong ore lode; the clearing of the level set at 2s. per bargain, and 12s. in 11. For the pitch in the back of the Great Bucktor lode is not yet cut through by bottom, being large, strong, and ore, as far as yet seen, being 5 feet and upwards. Things in general are just as usual in the other parts of the mine. We sampled on Friday last to Morwellham 72 tons of ore, about the same quantity as the last.—W. DOBLE: Dec. 6.

WHEEL FRIENDSHIP (ST. HILARY).—The settings on tribute are:—In the back of the 10 fm. level, west of Boundary, on Martin's lode, two pitches, two men in each, at 10s. in 11; in the back of the 10 fathom level east, on same lode, two pitches, four men in each, at 4s. 6d. and 7s. in 11; one pitch in the back of the adit, to two men, on the above lode, at 13s. 4d. in 11. At Crebo's, the men are actively employed in preparing the shaft for the reception of the lift of pumps of the 36 in. engine. The excavation for the foundation of the above engine-house is now ready, and the masons will commence building ere long. We are driving a very promising lode in the bottom of the shaft, a part of which was brought to the mine on Saturday. From the sampling list, you will perceive that we sampled on Tuesday last the promised quantity of 50 tons of excellent copper ores.—JOSEPH RICHARDS:

WHEEL GOLDEN CONSOLS.—The engine-shaft is sunk 6 fms. 2 ft. under the 107 fm. level; ground hard for sinking, lode 1 foot wide, unproductive at present. In driving the 107 south, the ground still hard and lode poor; we expect an improvement in this level in driving a few fathoms more, as it will intersect a cross-course. Thorne's shaft is sunk 5 fms. under the 117 fm. level, ground rather hard for sinking, lode 18 inches wide, producing some good work, and looking very promising for further improvement. In driving the 117 north, ground moderate; the lode is 20 in. wide, producing 12 tons of ore per fathom, and issuing a great quantity of water, which is being drained off by a pump. The 117 south, the lode is 20 in. wide, and is cutting down the water from the levels above the lode proves more productive, and I have the same opinion now that we shall have a better lode shortly. In driving the 117 south the lode is disordered, and not very productive at present. At Young's shaft, we have set to sink again under the 107 fm. level; we were obliged to stop sinking last month on account of too much water. In driving the 107 north, the lode is disordered and taken horse. At Webb's shaft, in driving the 97 fm. level south there is a great improvement in the ground, and I think, from its appearance, we shall have a better lode shortly; it is 18 inches wide, and is producing 12 tons of ore per fathom. The 97 fm. level, and the kibble brought to the bottom to take the stuff, and works well. In driving south, in the same level, the ground is good, the lode 2 feet wide, producing 6 cwt. of ore per fathom, and I never saw a more kindly lode in the mine. The tribute department is without any material change. We intend sampling 50 tons of lead ores this week, if we have no hindrance.—J. WILLIAMS: Dec. 4.

WHEEL HARRIETT.—The shaftmen completed fixing the lift and casing and dividing the shaft on Friday last, and we have commenced to sink the engine-shaft below the 74, on the course of the south lode, by nine men; set at 27s. per fm. The lode in this winze sinking below the 50, east of the engine-shaft, on the south lode, is 2 1/2 feet wide, composed of mundle, spar, peach, and stones of copper ore—a kindly lode; set at 11s. per fathom, by four men, at 30s. per fm., driving south on the cross-course, is still continued by four men; set at 3s. 10s. per fm.; it has been driven since first commenced 8 fms.; no lode seen as yet.—J. THOMAS: Dec. 4.

WHEEL JAMES.—In driving the 20 fm. level, south of Prekter's shaft, the lode has been disordered by a large course of spar crossing in the last few feet; the lode still keeps its regular size, being at present from 5 to 6 ft. wide, worth only 4 tons of ore per fm.—re-set on Saturday last 5 fms., at 4s. per fm., and 40s. per 100 kibles for the iron ore. In driving the 20 fm. level north we have intersected the elvan or porphyry course, which has greatly changed its underlay. In the levels above the underlay was 6 ft. in a fm., and in this end it is not more than 1 ft. in a fm. This end is re-taken at 6s. 6s. per fathom—stented 2 fms. of through the elvan course. The stope in the back of the 30 fathom level east is of moderate size, the lode being 7 ft. wide, worth 24 tons of ore per fm. The lode in Williams's stope, in the back of the 21 fm. level, is 5 ft. wide, worth 14 tons of very good ore per fm. The stope in the back of the 10 fm. level are as last reported—the lode being 6 ft. wide, worth 24 tons of ore per fm., of a good quality. The new shaft is sinking slowly, owing to the ground being hard. We have been clearing and repairing the levels in the old mine as fast as the air will permit. We are not able to work more than two hours at a time before we get a ventilation. Since writing the above, the lode in the end of the 20 fathom level south has greatly improved, worth 12 tons of ore per fathom.—H. B. GROSS: Nov. 29.

WHEEL KITTY (ST. AGNES).—The lode in engine-shaft below the 51 is 2 ft. wide the leader is about 6 in. wide, worth 3s. per fathom. The lode has not been taken down in the 51, east of the engine-shaft, since last report. The lode in the 51, east of the engine-shaft, is worth 12s. per fm. The men in Sunny Corner shaft are employed in taking down the north ground between the 24 and 34, to make it wide enough for a drawing shaft. The lode in the trip-plat west of Hoigate's shaft, in the 54, is producing a little tin. We have not as yet intersected the lode in either the 44 or the 25 cross-cuts.—T. BRAY: Dec. 2.

WHEEL MESSER.—I spent yesterday on the mine, and went underground; the appearance of the different operations are as follows:—the 40 west, on Messer lode, is principally capel, with spots of copper ore, but at present not of any value; driving east in this level the lode is promising, and opening ground that will set at high tribute. The 30, driving east on the same lode, is poor; the lode in the winze sinking in this level is producing 1 1/2 ton of copper ore per fathom; this is opening ground that will set at a moderate tribute. A cross-cut is driving north in this level to Mitchell's shaft; it

is driven east on the branch about 2 fms., and is opening ground that will set at high tribute. The bottom of the 20, between Mitchell's and Edward's shaft, is being stopped by 10 men, to take back the water from Mitchell's to Edward's shaft; this will take a week or two more to complete; this was an error in not carrying the levels properly at first, and causes an extra expense. At Williams's shaft a cross-cut is driving both north and south in the 10; in the north end they have ironstone, making the driving very slow; it has nearly reached the point where Williams's north lode is expected. Had they sunk this shaft to the 15, as I recommended some time since, they would have intersected it clear of this hard ground. In the south end the ground is favourable, and must be getting near Williams's south lode. At the adit level, a winze is sinking on Williams's north lode, and down about 4 ft.; the lode is 1 1/2 ft. wide, composed of quartz, gossan, and copper ore, and will yield nearly 1 ton of ore per fathom, and promising to improve. A winze is also commenced on Williams's south lode, which contains spots of ore. The south lode is being driven on east in this level; the lode is 2 ft. wide, composed of quartz, capel, and killa, but poor at present. At the boundary shaft, a winze is sinking below the 20 from surface, and close to the eastern boundary. On Tretoil lode, it is down 8 ft., where the lode is 1 1/2 ft. wide, split in two parts; the north part is 1 ft. wide, promising a little saving work. I have made a hasty calculation of the monthly expenditure required to fairly develop the mine. I fear we shall not be able to keep the monthly cost under £250, as I see, by going into the tribute account, it has hitherto left but little profit to the adventurers, being now set at 10s. in 11, for breaking only, the adventurers drawing it to surface, dressing, carriage, and all other expenses free to the tributors, and the dues.—JAMES SECCOMB: Dec. 3.

WHEEL MAUDLIN.—The cutting down of the engine-shaft below the 20 is progressing favourably. The 20, driving north-east by the slide, is at present poor; the pitch in the back of this level, where the shoot of ore has been driven through, has been set to two men, at 4s. in 11, for one or two months. The other tributaries are working away as usual, without much change.—W. TREVAY: Dec. 2.

WHEEL ROBERT.—There is no material alteration since my last in the lode; it is, as before stated, much easier for driving, and I hope to have an improvement soon, as we are getting into a softer channel of ground.—W. NEILL: Dec. 7.

WHEEL RUSSELL.—The sinking of Matthew's shaft has been continued, and is now down 10 fms. below the 50; the ground is still favourable for sinking. We continue sinking the winze below the 50, east of Matthew's shaft, but no lode has been taken down since last report. We have been driving the 30 north on the cross-course during the past fortnight, and I am glad to say that yesterday we cut the lode, which is looking very promising, it being 2 1/2 feet wide, producing 1 ton of ore per fathom. In the 37, driving east from Matthew's shaft, the lode has a very promising appearance, at present worth 1 1/2 ton of ore per fm. We continue to drive the 90 north on the cross-course towards the great north lode; the ground continues good for driving, and is producing small branches of spar, containing portions of beautiful copper ore. The pitches, on the whole, are looking as usual, turning out fair quantities of ore. We sampled last Friday 70 tons of ore, of improved quality.—A. BARNETT: Dec. 7.

WHEEL SAMSON.—We have not cut the lode by cross-cut, but are getting very near, and the ground is a little softer for driving.—J. SPARRO:

WHEEL SURPRISE.—We have not yet cut the wheel-pit lode in the 33 fm. level, but we are still intersecting small branches, with abundance of faces of mundle and ore against the heads and joints of the stratum that we are driving through, which indicates well. We have this day taken down the lode in the deep adit level east, which, I am happy to say, is turning out some splendid rocks of black and yellow. There are only deeper levels required, in my opinion, to make this mine a paying one.—A. BRAY: Dec. 6.

—A great improvement in the mine has recently taken place, not only in the channel of ground the lodes are imbedded in, but in the lodes themselves. A splendid course of ore has been cut in the adit level only a few fathoms from surface. The same lode will be intersected within a few days in the 33 fm. level, where a large deposit of copper ore may be expected to be laid open. There is also an improvement in the 23 fm. level east, and as they approach the cross-course a further improvement is expected.—THOMAS FULLER:

WHEEL TRELAWNY.—North Mine: We have commenced the sinking of Smith's shaft. The lode in the 35, north end, is 1 1/2 ft. wide, and worth 10s. per fm. In the 35, north end, the lode is 1 1/2 ft. wide, and worth 5s. per fm.; in the same level, south end, it is 1 ft. wide, and worth 5s. per fathom. We are driving in killa by the side of the lode in the 35, north end. In the 78, north end, the lode is 1 ft. wide, and worth 5s. per fm. In the 55, north end, the lode is 1 ft. wide, and worth 4s. per fm. The shaftmen are engaged in taking down the lode in Chippendale's shaft, which is 1 ft. wide, worth 7s. per fathom. We are sinking a winze in the bottom of the 78, north of Chippendale's shaft, where the lode is 1 foot wide, and worth 8s. per fm.—South Mine: We are still driving a winze by the side of the lode in the 20, north end, taken down in the 107 south end, since last reported. We are driving in killa by the side of the lode in the 92 fm. level, north end. The stope and pitches are much as usual.—W. JENKINS: Dec. 5.

WHEEL TRISTREM.—On Saturday last we set as follows:—To the eight shaftmen to drive west on the course of the lode in the 62 fm. level, at 7s. per fm., stented 2 fms. The 52 east to six men, at 3s. per fm., stented 3 fms.; the lode in this end is 10 ft. wide, 5 ft. of which is worth 3 cwt. of tin per 100 sacks; the west end in this level to six men, at 6s. 10s. per fm., stented 2 fms.—here the lode is 6 feet wide, and is improving for tin. The 40 west to four men, at 4s. 10s. per fm., stented 2 fms.; the lode in this end is 1 ft. 6 in. wide, all good saving work; the cross-cut in this level to four men, at 5s. 5s. per fm., stented 2 fms. The end in the 28, west of the winze, south end, is 2 1/2 feet wide, and worth 4 fms., at 5s. 5s. per fm., stented 4 fms.; the lode here is 2 ft. wide and worth 3 cwt. of tin per 100 sacks. To drive on the course of the first lode in the south-west cross-cut to two men, at 3s. 15s. per fm., stented 1 fm.; the lode in this end is just as last reported. To drive the east end on the new lode to six men, at 6s. 6s. per fm., stented 2 fms.; the ground in this end is very hard, and composed of killa, spar, capel, and stones of copper ore occasionally; the west end in this level to two men, at 5s. 10s. per fathom, stented 1 fm.; here the lode is as stated in the last report, with a branch of tin from 2 to 3 in. wide, and very good. We are getting on as fast as possible with the dressing-works, and preparing to erect the new burning-house; we have a quantity of tinstuff accumulating from the stamps.—J. JAVAN:

WHEEL UNITY.—In the rise in the back of the 82 fm. level, east of engine-shaft, the lode is 2 1/2 ft. wide, producing saving work for tin, and opening tribute ground. The lode in the 70 east is 2 ft. wide, kindly in appearance, and producing some good stones of copper and tin ores. We have just now intersected the lode in the 60, east of the little cross-course, east of No. 1 shaft; we have not had sufficient time to ascertain its width or contents, but hope to be able to report on it favourably by this day week. The lode in the 50, east of No. 1 shaft, is improved in appearance, and producing good stones of copper ore. In the 30, east of No. 2 shaft, the lode is 2 1/2 feet wide, containing gossan, spar, and mundle, with a little copper. All the other operations in, and throughout the mine, continue without any alteration requiring notice. J. VIVIAN: Dec. 4.

WHEEL ZION.—Saturday last being our setting-day, the following bargains were taken:—The 90 level east to cut through the lode, at 6s. per fm.; in crossing the lode we find it to be in a disorderly state so far, but what it may be in the north wall we have yet to prove; the 66 level to drive west, at 7s. 10s. per fm.; the lode continues to be promising, producing stones of ore. The 50 fm. level east to drive at 4s. per fm.; the lode is composed of spar and mundle, with stones of ore. We have about 10 fms. more to drive to under Richardson's shaft. The 30 cross-cut to drive south, at 7s. per fm.; we have about 6 fms. more to drive here to cut the lode seen at Bray's shaft. The lode in

MINES WHICH HAVE NOT SOLD ONE.—Angarraack Consols, Arundel, Gwyn, East Frongoch, Great Sertridge, Irish Consols, New Wheal Friendship, North Hingston, Tamar Martin, West Goginan, West Wheal Friendship, West Wheal Edward, Wheal Ludcott, Wheal Surprise.

COMMERCIAL NEWSPAPER STAMPS.

Extracted from a Parliamentary Return of the number of Stamps issued to each Newspaper published in London, for the second quarter of the present year, 1854:—

MINING JOURNAL	48,000
HERALD	25,000
RAILWAY TIMES	19,000
LONDON COMMERCIAL RECORD	13,900
JOURNAL OF COMMERCE	9,000
LONDON MERCANTILE JOURNAL	5,500
RAILWAY RECORD	4,125
RAILWAY GAZETTE	1,000

LEAD ORES.

LEAD ORE shipped at Aberystwith in the month of November.

Mines.	Tons.	cwt.
Lisburne	115	10
Cwmystwyth	105	0
Wales Pottery	99	15
Cwm Eryn	24	3
Lloveden United	21	0
Gwynedd	15	15
Court Grange	12	12
Cwm Gwyn	5	15
Lletty-owen-hen	5	5
East Dafen	419	19

COPPER ORE.

East Dafen

42 4

TICKETINGS FOR ABOUT 100 TONS OF FOREIGN LEAD ORE.

Mines.	Tons.	cwt.
Sims, Williams, Nevill, and Co. (Sunderland)	214	3 6
Walker, Parker, and Co.	13	10 0
John Bibby, Sons, and Co.	13	8 0
John F. Eyles	13	7 0
Newton, Keates, and Co.	13	7 0

Sold on the 2d December.

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Notes to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly sent on receipt; it then forms an accumulating useful work of reference.

SALES OF LEAD AND TIN.—We purposely detained the publication of our usual Quarterly Returns of Tin and Lead for many weeks, knowing how short they were of the real facts. We invited from week to week, in vain, the aid of purveyors and adventurers, to enable us to make the lists perfect. It is, on their part, therefore, ungracious to find fault with our statements after they have been published, when they possess the facility every week of sending us an account of what they sell; and this would ensure the quarterly returns being correct. Our desire is that it may be so for the future; and, therefore, we trust that we shall be enabled to commence the new year, and our 23rd Volume, with more satisfaction, not only to our friends, but to ourselves. We give notice, therefore, that we purpose publishing the copper sales ending December on the 30th inst.; the tin on the 13th, and the lead on the 20th, of January, 1855.

PHILLIPS'S METALLURGY.—Sir: Allow me to correct a statement which appeared in a letter, signed "scrutator," published in your Journal of last week. In speaking of Mr. J. A. Phillips, the writer states that that gentleman's *Handbook of Metallurgy* is used as a text-book in the laboratories of the Government School of Mines. Such a statement, I beg to say, is incorrect. Neither Mr. Phillips's work, nor any other in the English language, has ever been used as a text-book by the students; and Dr. Percy, the lecturer on metallurgy, has frequently stated in his lectures, that there is no English work which he could recommend to them to be used as such. HANLEY F. BLANFORD: *Museum of Practical Geology, London, Dec. 8.*

BORING.—Sir: In your Journal of the 4th November you mention that Mr. Wall, of London, had made arrangements for introducing kind's system of boring into this country. You inform me Mr. Wall's address, so that I may communicate with him on this matter.—T.: Dec. 5.—[We do not know the address of Mr. Wall, but, possibly, some of our readers can furnish it. Any additional information respecting the invention referred to will also prove very acceptable.]

OLD TREASURE COIN.—Sir: I will thank you to inform me whether the antimony ore submitted for sale by auction was actually disposed of—and if so, the price it realised?—Z.: *Old Broad-street.*

WHEAL GRANTVILLE.—Sir: This mine is under the management of Messrs. John Taylor and Sons, of Queen-street-place, Thames-street, who, with the utmost courtesy, are always ready to afford every information to "shareholders," as your correspondent must know, if he be one. The reports also appear in your Journal at intervals.—A. BOSSA FISH SHAREHOLDER.

MR. ENNER AND THE HOLMBUSH AND WHEAL MARIA CROSS-COURSES.—Sir: Observing some short time since a statement put forth by Mr. Enner in the *Mining Journal*, in which he states that the great cross-course of Holmbush cuts off the granite to the west side of Kit Hill, I beg to say that a statement is quite incorrect; that cross-course has nothing whatever to do with the granite, being some hundreds of fathoms to the west of it. The Wheal Maria cross-course, which Mr. Enner states as cutting off the granite to the east side of Hington and Gunnis Lake, is also incorrect, such not being the case; this great cross-course passes through the granite about Gunnis Lake, and granite may be observed at the surface for some considerable distance to the east of it, and, in two instances, across the Tamar River. Parties in the vicinity of these two cross-courses can bear witness to the correctness of these remarks.—A. MINER: *Culstock, Nov. 30.*

CROSS GILL HEAD CONSOLS (Cumberland).—Some interesting particulars of this mine, by Mr. Joseph Colton, of Tyes Side Mines, will be found in the *Mining Journal* of the 27th May last.

"A Victim" must seek his remedy through a solicitor, if he is desirous of proceeding further in the matter. We do not think that Mr. Guedalla will render him either advice or assistance; the return of the consumer has received for the considerable outlay and great trouble he has already taken, as evidenced by the limited subscribers to the proposed testimonial, is, we should think, sufficient to deter him from further interfering with such matters, beyond, indeed, so much as may serve his own purpose.

GREAT WHEAL YOR.—It is reported that a lode has been cut worth 5000 per fathom. The produce for the past month will be 26 tons, being an increase of 7 tons upon the returns for October.

IRISH CONSOLS MINING COMPANY.—Sir: I did not intend replying to Mr. Townsend's explanation, as to my not being officially aware of the existence of his report upon the mines of this company, which appeared in your Journal of the 7th October. My letter of the 4th ult., which he refers to, being solely to deny the truth of the statement that that report was read at a meeting of shareholders, held on the 3d of that month, as also to state my not being aware of its existence, except through your paper (how it appeared there I am to this hour unformed); but your Dublin correspondent, in his letter of last week, appearing to expect my reply to Mr. Townsend's communication, I have only to add to my former letter, that until yesterday, when I was handed the report (not to be read at the meeting of shareholders then about to be held, but to lay up with the other reports on the mines), I knew nothing of its having been made, except through the columns of your paper, as above stated. The value of this report, and others of the same nature, are on the eve of being fully tested, as in the accompanying report, received this morning, from the captain at the mines, he states, "that a valuable lode has within the last week been cut." This, I trust, bears out the very favourable report of Captain Matthew Francis on the company's property, that appeared some time back in your Journal, and which, in a letter from that gentleman I recently sent you for insertion, he fully attests to, notwithstanding Mr. Townsend's unfavourable opinion of the Irish Consols Mine.—THOMAS B. LANE: *42, Moorgate-street, Dec. 1.*

SOUTH COKE MINING COMPANY.—We are informed that the majority of the committee of management are in favour of erecting a Cornish engine, in preference to hiring a portable one.

WHEAL JEWELL.—Sir: I should esteem it a great favour if some one of your well-informed correspondents would furnish me with the date when Wheal Jewell (near Tavistock) was worked, the amount of share capital of the adventurers, and the amount received by the shareholders in dividends; also, how long is it that this mine discontinued working?—AN OLD SCHOLAR: *St. John's Wood, Dec. 6.*

CASTLE DINAS MINE.—"S." (Bath) should communicate with the committee of management at Salvador House, Bishopsgate: we have already had too much exacted from us by allowing similar statements to appear in the Journal. There can be no question, however, but the defaulting shareholders should be compelled to pay—one of the delinquents, we know, has recently obtained some advantage through legal proceedings, which, in common honesty, should be devoted to the payment of his just debts.

"Inquirer" (Wexham).—"The dividends per share" represent the entire amount paid on each share; the other particulars also have similar reference.

UNION TIN MINE.—Sir: At the meeting held in August last, it was represented that the additional capital required (15000) was to be paid up by the shareholders in 1000 shares, and that the balance at that time in favour of adventurers was 1227 15s. As there has been no meeting since, and doubts are entertained whether the 15000 was actually paid, perhaps some of your readers can inform me of the real position of the adventure?—P. G.: *Chelsea, Dec. 6.*

LURE BATHURST GOLD COMPANY.—A Purchaser can obtain every information respecting the case of Woods v. Bell on application to Mr. Guedalla, at the City Club.

CASTLE DINAS MINE.—Sir: Touching the affairs of this mine, surely your correspondent, "S. R.," not only has been abroad, but is so still. The company is not allowed to lapse, but, on the contrary, after a severe struggle, is just emerging from a "sea of troubles," with a fair prospect, after a few more efforts, of being able to land a cargo of first-class tin. A committee has "enquired into our affairs," and reported thereon. Defaulters are at this present moment being compelled to pay up their calls, and the present committee of management are making vigorous and successful efforts to rescue the undertaking from the ruin which, three months since, threatened to absorb it. All this will be proved at the next general meeting (in about three weeks), when the committee will give a full account of all their proceedings, as well as of their financial position. But all this "S. R." would have known, if an adventurer, and had he not been "absent from the country."—R. T., *Purset: Dec. 6.*

FERRAN UNITED MINES.—Sir: Can you inform me why the committee of management have discontinued publishing the weekly report of the captain? Is it so discouraging, that they consider it desirable to keep it as secret as possible?—R. S.: *City, Dec. 7.*

BODMIN UNITED MINES.—Sir: I should be very sorry to do Capt. Rich, or any other agent, an injury, by the insertion in your Journal of a notice of his faults. What I intended was a correction of an alleged evil. My authority for the statement as to the excesses in the account-house is a gentleman residing at Bodmin, who wished the statement to be made. If he does not substantiate that statement, I intend to publish his name as a slanderer of his neighbours. He is well known to me, and I did not doubt the correctness of his information at the time he gave it.—R. S., *Purset: Dec. 6.*

QUARTZ ROCK MARLBOROUGH COMPANY.—"J. L." (Brighton).—The reports recently received are of a more favourable character, but additional capital is required to fully carry out the company's operations, and a meeting is called for the 18th inst., for the purpose of authorising the directors to raise 20,000, on mortgage, by the issue of debentures.

NEW SOUTH WALES COAL AND INTER-COLONIAL STEAM NAVIGATION COMPANY.—We have received a long account of the proceedings at the meeting for our esteemed correspondent; but when he states we only published a short report, he must certainly have overlooked the article which appeared in our last Journal, page 801; and, indeed, with the exception of the extracts from the report of the committee of investigation, the account furnished by our correspondent is not even a correct statement of what took place.

The return of copper and lead ores raised in South Australia appeared in last week's Journal: we are, however, obliged to "S. P." for his attention.

MENABEE CONSOLS.—Sir: I should be glad to be informed whether Mr. Richard Goodwin has paid the poor miners, and rendered an account of the application of the balance of the 2500 received from some of the adventurers for the costs of working the mine? Perhaps some one of your readers will be able to satisfy my enquiry?—R. S.: *Dec. 6.*

"Furina" had better consult some merchant interested in the trade of the country, as to the prospects of the association, before investing.

BLACKTOWN MINE.—Sir: For the information of your correspondent in Dublin, I beg to state that the quantity of copper ores from the Ballyvirgin Mine, sold at 21s. 6d. per ton, was 2 tons 7 cwt. and at 14s. 6d. per ton was 13 cwt. The captain has now 3 tons of first quality, and 8 cwt. of second quality, ready for shipment. With regard to the nature of the lode, Capt. Smith's report, which your correspondent quotes, states it to be a small rib of copper, which continued from the shaft for 9 fms., without once cutting out. Mr. Lewis Thompson, the eminent mineralogist, who examined the mine for some of the shareholders, states that the formation of the ground, and the copper produced, is the same as that of the celebrated Wicklow Mines, and worth 15s. per ton.—E. PRYNOR, *Purset: Dec. 8.*

"C. W." (Hoxton).—Native boracic acid occurs in a state of perfect purity, or mechanically mixed with a little sulphur, at the Island of Volcano, one of the Lipari group, sometimes massive and incrustations, which present a fibrous structure, frequently pulverulent, and disposed in a loose covering on the surface of the sulphur. It is likewise deposited by some of the lagoons of Tuscany, and at the hot springs of Sasso—a locality which has procured for it the trivial name of sassoline. When dissolved in alcohol, it communicates to the flame a green tint.

IRISH "ELVAN."—Sir: I forgot, in my last week's reply to your Dublin correspondent, to notice his query respecting the existence of "elvan" in the neighbourhood of "Skull, Ballydeob, Crookhaven, &c." in the County of Cork; in which head I would say that I apprehend no "elvan," properly so-called, exists in any part of that country, what are generally called "elvans" there being only "basalt" or "quartzite," interstratified with slate. Of course, it is impossible to say that no "elvan" will ever be found in this district, as it is impossible to prove a negative more especially as a decided igneous "elvan" occurs at "Bee Island," and "Black Ball Head," about 20 miles further to the north, in the same county, of which I have a specimen now before me.—R. W. TOWNSEND: *Henrietta-st., Dublin, Dec. 7.*

"D. J." (Rhondda).—The dividend declared by the Nantlle Vale Slate Company was only 1s. 3d. per share. The amount was calculated at 12½ per cent. for the half-year, instead of per annum.

MINING IN CORNWALL AND DEVON.—Sir: I have perused with considerable interest the clear and elaborate statement by Mr. R. Treddinick, in the Supplement to your Journal of the 23rd Nov., concerning the mines in Cornwall and Devon, and would recommend the paper to the notice of every person connected with the mining interest. The accumulation of facts therein comprised must have occupied Mr. Treddinick much time, and involved much calculation. As an adventurer in Cornish mines, I tender him, although a stranger, my sincere thanks, for affording me such a mass of useful information gratuitously.—F. WEBB: *London, Dec. 6.*

NANTLLE VALE SLATE COMPANY.—In answer to an enquiry in last week's Journal, we are requested to state that the offices of this company are at 32, Moorgate-street, where Mr. Bacon (the secretary) will give the fullest information to shareholders.

NON-REMUNERATIVE MINES.—Sir: I wish you would deal a blow against those mines, such as Wheal Gwenn, Penbale Consols, and many others, which, with fair sales of ore, are constantly making calls on the unfortunate adventurer, while the value of the shares, whatever the number of calls, keeps pretty steady at about the price of two calls. Can it not be ascertained whether these mines are likely soon to be better, which in deep lead mines is scarcely probable? And would it not be the wisest course to wind up, sell the machinery, and leases, if you can, and divide the proceeds, whether more or less? Pray give us a lift. I was glad to see the remonstrance respecting Wheal Golden in your last Journal.—A. SHAREHOLDER: *Dec. 8.*

"T. B." (Hull).—Any of the works comprised in the list can be obtained through a local bookseller.

"G. G." (Lincoln).—According to advices received, it was stated that the machinery was all in order, and that the crushing and amalgamating operations would commence on the 15th of November.

"J. M." (Dorking).—At the present period, however feasible the plans may be, but very few persons would be induced to embark their capital in gold mining. The advantages laid down may be apparent; but as a general failure has taken place, the public generally has no longer any confidence in quartz mining. When some results arrive to hand from the scene of operations, probably the proprietors may make an effort to save something from the wreck.

"G. T. C." (Stourport).—Only one number has been published, another is contemplated.

"T. L. T." (Bathmies).—In all well-regulated mines, under the Cost-book System, meetings of the shareholders are held bi-monthly or quarterly: at these periods any proprietor can ascertain his liabilities, and by paying his quota say, if he pleases, declare off. No one should purchase shares in any of these associations unless he knew how it was managed—whether they held meetings, and if they were public. This would probably be attended with some trouble, and no small inconvenience; but were the public to exercise these simple precautions, many of these mushroom schemes would prove abortive; and the unprincipled knaves who now fatten upon the credulity of the public, and by their dishonest practices bring mining enterprise into disrepute, would have to seek some other and less questionable means of obtaining a livelihood. The Stannary Courts do not extend to Ireland.

WHEAL KITTY (St. Agnes).—Sir: Have we two agents employed—Burgan and Buckingham?—or, is the latter only occasionally called in to inspect?—A. SHAREHOLDER: *St. Agnes, Dec. 6.*

"P. P." (Cornhill).—The solicitor for the Inland Revenue would be able to afford the information. Patent articles of food would be in the same category as patented medicines, and receive the like protection from the Legislature.

The quotation of Lydford Consols last week was inadvertently stated to be 1½; it should have been ½. We understand a valuable discovery is daily looked for at this mine.

We have particularly to request that subscribers and others, in paying accounts, will send cheques or post-office orders, in preference to postage-stamps.

* It is particularly requested that all communications may be addressed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

Post-officers orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, DECEMBER 9, 1854.

We rejoice to learn, from Mr. NASMYTH, that Government has at length entered cordially into his views, and has, in the most liberal spirit, empowered him to proceed to carry out his designs. We shall now have a full opportunity of practically testing the improvements of modern science, and if the agency of the steam-hammer shall, under the direction of its inventor, place at the disposal of England iron ordnance of a character and power hitherto not only unknown, but almost unimagined, we may hope, by the speedy and glorious termination of the present war, to secure a permanent peace. The British public are fully aware that, by the progress of science, what were once and long deemed mere fanciful theories have, in the use of gas, the locomotive steam-engine, the electric telegraph, and other triumphs of human intellect, become palpable realities. They will, therefore, watch with intense anxiety its application to the all-engrossing requirements of the war. We purpose to devote our best attention to the proposed improvements, but our readers must be fully conscious that secrecy is essential to success, and can, therefore, only expect from us such information as shall be consistent with our duty to the State.

The observations which appeared in our last Journal on the casting of iron ordnance have attracted much attention, and we publish two from amongst the many communications which have reached us on the subject. The information supplied by our old and valued correspondents, J. and EDWARD WALKER, of Tipton, Staffordshire, is peculiarly deserving of notice, and satisfactorily removes the impression, if it ever existed, that the ironfounders of England were behind in the progressive advance of the age. The wisest, the ablest, and the most enquiring minds have naturally their predilections; men are attached to the arts which they best understand; but we must remember the declaration of STEPHENSON, that impossibilities are unknown to modern engineers. Time can alone decide between the declarations of Mr. NASMYTH and the equally confident counter-statements of his opponents. The issue to be tried before the country and the world is a momentous one—viz., whether cast or wrought-iron ordnance is the fittest for the present unprecedented emergency, and we must await the determination of that issue. It is due to our own position, however, to assure our excellent friends that it was never intended by us to disparage the quality of the iron used in our British castings; we merely stated what may now be assumed as fact—that it was found impossible to burst a Russian 13-inch mortar, brought from Bomarsund by the *Leopard* steam-frigate, weighing under 2 tons, while English 13-inch mortars weighed not less than 5½ tons, and some of them had, we believe, burst when in actual use. Our readers must judge for themselves whether the comment on this fact is satisfactory, and our correspondents will at once see that the proper place to test an English mortar of the same size and weight as that from Bomarsund is at Woolwich. To the other highly interesting and important details contained in that communication we earnestly direct public attention. The magnitude of the ordnance cast by Messrs. WALKER for the fortifications of Alexandria contrasts strongly with the comparative insignificance of that used before Sebastopol. We presume, however, that when the tramway shall be completed between the sea and our besieging batteries, opportunities will be afforded of using cannon and mortars of sizes adequate to the emergency.

The communication signed "C. S.," from Sheffield, comes from a very eminent manufacturer in that town, a constant contributor to our columns, for whose scientific knowledge and practical skill we can safely vouch. The same course which has been adopted by Mr. NASMYTH is open to him; and we should, therefore, recommend our valued correspondent to submit details of his proposed plan to the Board of Ordnance, in London, where we are satisfied that they will receive the best attention.

The proposition of Mr. PERKINS, son of the original inventor of the steam-gun, to throw shot and shells of a ton weight against Sebastopol, and against the equally unapproachable Russian fortresses in the Baltic—Constradt, Heligoland, and Swabourgh—has also attracted great public notice, and cannot, we presume, be overlooked or disregarded by the Government. Those who saw the steam-gun in former years at the Adelaide Gallery, in the Lowther Arcade, will not readily forget the effects produced upon leaden balls discharged from it against an iron target, effects quite as striking as if the balls had been fired from heavy ordnance. The adoption of the steam gun was pressed upon the Government of that day, but the Duke of WELLINGTON was then, we believe, Master General of the Ordnance; he had achieved great successes with the ordinary engines of destruction in use, and we were then at peace, without any pressing occasion for new inventions.

There existed at that time a reverential deference to the opinions, per-

haps to the prejudices, of that great man; his word was authority, and no person at that period ventured to question his military opinion. Circumstances have, however, altered materially since the Iron Duke declined to adopt the steam-gun amongst the implements of war. We are unapprised whether there is any recorded opinion by him of its usefulness for warlike purposes, or whether he was merely influenced by a feeling that its adoption was at that period, one of profound peace, unnecessary, or, at all events, premature. The position of the country is, however, completely changed: science, since then, has silenced prejudice; and if WELLINGTON were now living, that great soldier would be amongst the first to adapt himself to that altered position. For the first time, at least, in the modern annals of England, even although aided by the power and valour of France, she has been obliged to convert the bombardment of Sebastopol almost into a blockade. The assailants, as well as the assailed, may be said to have retired into winter quarters; but as offensive operations must be renewed when the inclemency of the season shall have subsided, every effort that human skill and capacity can devise must be put in action to secure success. The present Board of Ordnance will not be permitted to shelter themselves from a trial of Mr. PERKINS's machinery, by the assumed disapproval of the Duke of WELLINGTON: a fit opportunity offers for the experiment, and there are to be found in the country men fully competent to test and to decide on its efficiency. The British people will not endure further apathy on a subject of such moment; and popular anxiety can only be satisfied by a fair and perfect trial. While, however, we stipulate for fair play for Mr. PERKINS, we cannot conceal from ourselves the fact that steam wants the expansive power of gunpowder; and, as scientific observers, we much question that effects can be produced by any action of steam, so concentrated and so powerful as those which result from the explosion of powder. Although Mr. PERKINS may fail in realising his conceptions of rendering the steam gun a substitute for, or rather, a vast improvement upon, heavy ordnance, still, perhaps, it may prove a useful auxiliary in defensive warfare; and Mr. PERKINS will have deserved well of his country, if it can be rendered to any extent available for the protection of the camp, or entrenchments of the Allies against the countless hordes of Russian soldiers. The *Chalmers* values at nought the lives of his soldier sons; we are, on the contrary, bound by every obligation of honour, duty, and feeling, to assist, as well as protect, our gallant countrymen with all the improved appliances which science can devise and art achieve.

The British public have not forgotten that the most distinguished naval commander of the day, one whose eminent public services during the last war placed him second only to NELSON, announced in the early part of the present year that he had submitted to the Admiralty a plan for the total destruction of Constradt. The reputation of the Earl of DONALD as a scientific and mechanical inventor almost equals his renown as a seaman; we, therefore, trust that satisfactory explanations will be demanded from Government, immediately after the assembling of Parliament, as to the reasons for declining to adopt the proposal of the noble and gallant earl.

We feel proud to be the medium of introducing to notice a new and hitherto untried implement of war, named by its inventor, Mr. ANDREW CHALMER SMITH, "the Lightning Projectile." It is devised, by its ingenious discoverer, on purely scientific principles; the propelling force being the expansive powers of the gaseous substances created from water decomposed by the action of the electric fluid. Gunpowder acts by the expansive power of the gases produced by its ignition, 2000 times its bulk being its average expansive force. The average expansive force produced by the combustion of the gases obtained from the decomposition of water is stated to be from 3500 to 4000 times the bulk, when exploded on the plan adopted by Mr. SMITH. If such a power be manageable, and brought under due control, we shall have a projectile force more than 1½ greater than that of gunpowder, and capable, of course, of producing effects comparatively more effective. We have been given to understand that the remarkable suggestions of Mr. SMITH have, to a certain extent, been already adopted at Woolwich, and, as ordinary guns can be fitted for the purpose, that his apparatus is already in course of application to several pieces of ordnance. It is expected that experiments will be very shortly made on an extensive scale, which, if successful, will tend to supersede the mighty and destructive agent so long in use; and the present age will be henceforth distinguished for the introduction of a new and surpassing power, likely to be attended with results in future wars, as great and decisive as those which succeeded the discovery of gunpowder.

The extension of railways in France has forced upon the Imperial Government, at least in the important article of iron, some relaxation of the prohibitory laws which antiquated prejudices deemed essential to the protection of native interests. As the orders for the large supplies required can only be executed in England, we find the commercial relations between the two countries daily expanding, as the alliance between the Governments becomes closer for the purposes of offensive and defensive war. The national journals, which may be fairly presumed to express the feelings, while they indicate the wishes and wants, of the people, freely acknowledge the vast benefits which France is already deriving from a more wise and liberal policy, and labour to impress upon the public that further deficiencies remain to be supplied, and other requirements to be satisfied, by affording still further freedom to the trade in iron. A very able paper has appeared in the *Debate*, from the pen of M. MICHAEL CHEVALIER, written with the design of showing the injurious effect to which the prohibitive system has affected, and still continues to affect, one great branch of national industry—that of agriculture. It is justly observed, in that publication, that the two countries in which the cultivation of the soil has made the most extensive progress are those in which iron is cheapest—Britain and Belgium; and the writer affirms that one of the greatest acts of justice which could be conferred on the agricultural interest of France, would be, to relieve it from the impost which it pays on iron through the intervention of its customs legislation.

The hitherto limited consumption of that invaluable article for agricultural purposes is attributed to the exorbitant price which it attained—a price which has prevented cultivators in general from providing themselves with the implements required for improving their system of culture. French agriculture is, therefore, avowed to be behind that of neighbouring states, because the French farmer, not being able to procure at a cheap rate those iron implements absolutely required for good husbandry, is obliged to do without them. It is observed, in the essay, that in one of the worst fits of inspiration it ever had, the Government of the Restoration, repudiating the sound traditions bequeathed by the spirit of 1789, which were in this instance respected by the first republic and the first empire, laid heavy duties on the raw materials of industry. England had expended her treasure, and shed her best blood, in endeavouring to restore the Bourbons, and almost their first act—the policy of prohibition—was ungratefully aimed at us; but it has proved a fatal policy to France. It was termed by BENJAMIN CONSTANT, in the *Chambers*, at the time, "the enthusiasm of high prices"—an enthusiasm which we have lived to see subside, in this country as well as in that. It has been long the traditional policy of France to extend protection to the products of her soil, while, by a strange perversion of principle, she defeats that very protection by depriving the cultivator of the means of increasing the products. Accordingly, the customs duties levied on the several articles of paramount necessity for agriculture, and particularly those imposed on iron, have produced mischief, not only widely extended, but now generally deplored throughout the country. In like manner, the duties on agricultural machinery and farming implements are excessive, often surpassing the cost of the articles themselves. The French mechanical engineer cannot afford to manufacture agricultural implements and machinery at a reasonable price, and the great English establishments, with prohibitory duties before them, will not venture to export the varied improvements which we possess. The French agriculturist, when he has learned their value by the example of this, and cannot find the valuable appliances which our farmers and those of Scotland employ on sale in the interior of his own country, is placed under the vexatious alternative of having them made specially for himself, at enormous cost, or doing without them altogether. The latter is the alternative he generally adopts, and thus a national disadvantage becomes fairly chargeable against the prohibitive system. It is daily becoming more and more apparent to the French public that agriculture pays the expenses of the prohibitive policy, and the farmers themselves, generally the loudest clamourers for protection, are beginning to feel that they are amongst the chief sufferers from it. The Government has wisely determined to reduce by degrees the duties on iron, and the policy of that diminution furnishes an admirable means of reducing, to some extent, the charges on agriculture. The abolition of the duties on iron would be, in effect, equivalent, in well-conducted farms, to the reduction of considerable direct taxation; and, on less cultivated land, would prove a clear and powerful inducement to the introduction and adoption of good farm-

ing implements, as well as to a proper adaptation of crops for economising the fertility of the soil.

The free-trade system in England was successfully defended, on the grounds that the land could be made vastly more productive by improvements in agricultural implements and in general farming. The results which were confidently anticipated have been to a certain extent realised; but there is scarcely any branch of our mechanical industry that has been called into more striking activity than that devoted to the manufacture of agricultural machinery. We have reaping-machines, mowing-machines, and threshing-machines everywhere exhibited, and everywhere in operation; and we see the portable steam-engine in very general requisition for the purposes of the farm. The daily increasing communication between the two countries is opening to the observation of the acute and intelligent French people every species of improvement which we possess. The department of agricultural machinery was not the least striking or important at the Great Exhibition of 1851; and the approaching display at Paris furnishes an admirable opportunity to our great manufacturers of asserting their pre-eminence, and probably of laying the foundation hereafter of an extensive trade. Many of the superior farming implements which our leading agriculturists employ will be necessarily new to the more primitive farmers of France; but national jealousies are wearing fast away, to subside into a generous and useful rivalry. In extending its liberal policy, the French Government has weighty interests to overcome, but timidity is not its characteristic; and if the country can be made to understand the advantages to be derived from an increased trade with England in manufactured as well as in wrought-iron, the Emperor is not a likely man to resist its demands. Both nations are now deriving great advantages from the extension of the iron trade. On the 1st Jan., 1855, the duty is to be still further reduced; and with that reduction we may fairly anticipate a still further expansion of our commercial relations. But while England must necessarily, from her capital, and the activity and intelligence of her operations, participate in the benefits which are destined to result from the opening of new sources, France possesses vast beds of coal and iron ore; so that, looking to the iron forges, the national industry has nothing to fear from the reduction of the iron duty. To the increased occupation of her forges may be added that of various other branches, employing a far greater number of hands—such as the trades of the whitesmith, blacksmith, wheelwrights, and agricultural implement maker, &c. These several trades, and the numerous operative classes they include, would be extended to a degree unknown, if iron were only as cheap in France as it is here; so that cultivators might employ as much of it as was required for the prosperous tillage of their land. France is rapidly advancing in the mechanical arts; and it is inconsistent with the spirit of the age and of the people, that she should long continue inferior to neighbouring countries in the important departments of rural economy and practical agriculture.

In the last number of the *Proceedings* of the Birmingham Institution of Mechanical Engineers, a very interesting paper appeared, which was read by Mr. WILLIAM FAIRBAIRN, of Manchester, before that society—descriptive of a newly-invented steam travelling crane, the construction of Messrs. DUNN, HATTERLEY, and Co., of that city. The economy of manual labour in working travelling cranes has long been a matter of great importance to the builder and contractor for heavy works, and steam-power has been for some time employed for the lifting and removal of heavy weights by a steam travelling crane. Although the amount of saving in wages thus effected by machinery, compared with the ordinary hand-labour machine, had been sufficiently proved during the last four years, it was found that longitudinal shafts or bearings, where a fixed engine was employed, were very expensive. The great length of the longitudinal travel in the remarkably extensive works for the viaducts and bridges of the Grand Trunk Railway of Canada, and the lubrication and friction of the longitudinal shafting, rendered it peculiarly so: the saving of those shafts and bearings was not the only consideration—the wear, tear, and lubrication being a further source of expense, and the repairs were found to be very inconvenient.

The advantages proposed by the new crane were, that the steam-power travels with the traversing carriage, and does not require any longitudinal shafts or bearings, the machine closely resembling the general appearance of the ordinary travelling cranes, commonly used by masons and contractors. The longitudinal way, transverse carriage, and crab, are arranged in the ordinary manner; while the steam-engine and boiler, with the driving gear, are supported on a platform at one extremity of the transverse carriage, being fixed to it, and travelling with it in a longitudinal direction whenever so required. The steam travelling crane which formed the subject of the paper was designed for the contractors, Messrs. PERO, BRASSY, and BETTS, and intended to be employed in the construction of the works of that railway, and is, in effect, a new application of the portable steam-engine. A pair of small direct-acting horizontal high-pressure steam-engines are secured to the main timbers of the traversing carriage, the boiler being constructed for burning wood, the cheapest and most abundant Canadian fuel; the tubes are made of solid copper, without seam or joint, so that the acid from the wood should not corrode them. The engine and boiler, with the driving gear, are protected from the weather by a cabin, constructed of light framework, and covered with a corrugated iron roof, so as to render the machinery complete.

The power of the engine is transmitted by a spur-pinion upon the middle of the crank-shaft, through a spur-wheel placed on the horizontal main driving-shaft, which communicates the motion for hoisting, traversing, or moving the crane longitudinally, and every motion can be used independently of either of the others, or simultaneously, when required. The communication of power to the different motions is effected by three sets of mitre-wheels upon the main shaft, which are engaged or disengaged at pleasure, by means of three handles that move the sliding clutch-boxes as required by the attendant; three mitre-wheels being furnished to each motion, so that, whilst the engine revolves continually in one direction, the reversing of any motion can be effected by the intermediate wheels, as in the ordinary manner. The motion for moving the carriage longitudinally is conveyed through the wheels at the extremity of the driving-shaft furthest from the boiler, the arrangement for moving the crane longitudinally, by means of spur-gear driving the travelling wheels, being similar to the plan adapted to a hand travelling crane, while the travelling wheels run upon rails, which are fixed at a gauge, centre to centre. The hoisting and lowering motion is transmitted to the chain-barrel of the crab by means of an endless chain, which is placed in the longitudinal direction of the traversing carriage, and is driven by a pulley upon a counter-shaft parallel to the main one, the motion being communicated by a pair of mitre-wheels through the short intermediate shaft at right angles. This endless chain is also connected with a pair of mitre-wheels fixed at the lower end of the crab-carriage, which give motion to a worm-wheel, the latter being keyed upon the chain-barrel.

The transverse motion of the crab is obtained by another chain, placed in a parallel position on the opposite side of the main timbers of the traversing carriage; this chain is attached to the four-wheeled crab, and passes over a pulley on the axis of the worm-wheel, which is driven by the level gear, while an additional handle is provided for the purpose of throwing out of gear the chain of the hoisting motion, by means of a clutch-box, at the time of the transverse motion of the crab, and the chain then runs with the crab. A simple apparatus for adjusting the requisite tension of these chains is provided at the furthest extremity of the two main timbers of the traversing carriage, at the opposite end to the engine, consisting of a tightening pulley, sliding in grooves, and drawn back by a screw. The engines are 6-horse power collectively; the crane is constructed to lift at the rate of 6 feet per minute, while the longitudinal motion works at the rate of 30 feet per minute, and the transverse motion at the rate of 20 feet per minute. The motions can be worked altogether, or separately, as desired, and the clutch-box levers are so arranged that the man in attendance can work all the motions from one place.

The paper, and the description of the machinery, by Mr. FAIRBAIRN, led to an interesting discussion. Mr. DUNN exhibited a working model, and showed the different motions in operation. He observed that the improved crane was similar in principle to the ordinary travelling cranes, with some altered details; the peculiarity was the addition of the portable engine, to adapt the crane to a more extended distance of traverse, where a continuous shaft from a fixed engine would be impracticable. The machine was intended to work at a distance of three-quarters of a mile, by extending the framing and traversing rails. The first was completed, and was intended for setting the stones of the piers in the Great St. Lawrence Bridge; it was not yet at work, but several more on the same principle were being constructed. The engine and boiler weighed 2½ tons; a pair of cylinders, with cranks at right angles, were employed to give uniform motion without a fly-wheel; the boiler was tubular,

2 feet 4 inches diameter, with 2-inch copper tubes; the fire-box casing was lined with fire-brick, and had to be adapted for burning green wood, the fire-bricks retaining the heat from the first charge. In order to supply water, a wrought-iron tank was placed under the engine, the top plate of which formed the bed-plate for fixing the cylinders; and for the purpose of preventing the travelling-frame running off the rails, a double flange was employed, 1½ inch deep, both inside and outside of the travelling-rails. It was objected that, in the construction of the crab, the endless screw and worm-wheel for the lifting barrel would be subject to wear, and likely to require repeated renewal; but, in answer, it was observed that the screw-motion, though subject to more wear than toothed-gear, was generally used for the purpose of lifting, as it was more compact and secure, and could be readily replaced when worn. It was stated that the cost of the whole was 550*l*., including the engine and boiler, but exclusive of the timber-work for the frame of the traveller platform and shed over the engine, which were not sent out, and would be supplied in Canada. The estimated expense of the entire could not exceed 650*l*.. The crane was intended for lifting 10 tons, and moving that weight in any position; it would, however, take more, but was constructed for that load at regular work.

We have here applied to practical purposes a new adaptation of the portable steam-engine; and we have no doubt that the crane is but one of the many important uses to which it may be rendered available.

The important mining appeal case, *In re the PENNANT and CRAIGWEN LEAD MINING COMPANY ex parte MAYHEW*, and the Winding-up Act, heard before the full Court, on the suggestion of the Lords Justices, was finally decided on the 3d inst. The company was formed in 1846 for working mines at Dinas Mowddwy, in Merionethshire, and was consolidated in 1848 with another company, called the Craigwen, both being conducted on the Cost-book Principle. The capital was 16,000*l*., divided into 8000 shares, of 2*l*. each; and of these a Mr. SUDBURY, being a holder of 63, in 1851 he arranged with Mr. MAYHEW that he should become the purchaser, and, as such, entitled to the interest in both undertakings, SUDBURY paying the calls in the Pennant Company, and MAYHEW the calls in the other. On proceeding to the offices of the Pennant Company with the transfer and notice, the purser at first hesitated to receive them, there having been at the time some mention of a meeting respecting the winding-up of the company, but he ultimately received them. Mr. MAYHEW then paid the usual fee of 2*s*. 6*d*., on which the transfer was duly entered in the cost and transfer-books, in which Mr. MAYHEW appeared as the transferee of the shares. The affairs of the company were embarrassed at the time of the transfer, and after many ineffectual attempts to improve their position, the shareholders finally, in Dec. 1851, obtained an order for winding-up. The name of Mr. MAYHEW was accordingly put on the list of contributories for 63 shares, and a call made, which he refused to meet; he then resisted the enforcement of it by the official manager before the Master, on the ground that he had been deceived by Mr. SUDBURY as to the embarrassed state of the company, and that he had never received from the purser any acknowledgment or acceptance of the transfer. The Master, however, on proofs before him that the purser had given notice, and that MAYHEW was apprised of the state of the affairs of the company, retained the name on the list. This ruling was confirmed by the Lords Justices, and then arose a question as to the time at which Mr. MAYHEW was to be held a contributory, and whether he was liable for the debts of the company incurred before he had become a shareholder by transfer.

This was considered a question of so much importance, that it was specially reserved for a full Court; and it was now argued that Mr. MAYHEW could not be called on to contribute to the payment of debts to which he was not a consenting party. There was no general liability between the transferor and the transferee, and no special contract between them with respect to the debts of the company, and the rules were altogether silent on the subject. It was, on the other hand, insisted for Mr. SUDBURY that Mr. MAYHEW had taken the shares subject to all the liabilities—the transfer stating that the shares were to be held by him on the same condition, with the same rights, privileges, and profits, and subject to the same liabilities as had affected the original holder. It was contended, therefore, that MAYHEW took the shares according to the general principle that the purchaser stands in the place of the seller, and authorities were cited to show that the liability of the former owner of the shares ceased with the sale.

The Court were unanimously of opinion that the latter view of the law was the correct one. A compliance with the rule of the company regulating the transfer of shares, absolved the shareholder from all future liability. It was quite settled that if nothing appeared on the face of the company's deed that in any manner affected the questions of past obligations, the buyer of shares must take them, subject to the state of the concern, as it might happen to stand at the time of the purchase. This view of the case was strongly confirmed by the language of the transfer itself, which transferred all the interest of the seller in the hands of the purser for the benefit of the purchaser; and even if that were not so, the mere title of transfer afforded irresistible evidence that the transferee was to stand in the place of the transferor. The language of the rules, the prior decisions, and the wording of the deed of transfer, all combined to satisfy the Court that Mr. MAYHEW was liable from the time of accepting the shares to all that Mr. SUDBURY was liable for at the time he parted with them. In reference to a question raised in the course of the argument as to a partnership, the Court declared that there was no such thing as a partnership in such cases. There was merely a transfer of what was called a share; it was not at any time a partnership, and the transferee represented all the rights and interests of the transferor. The Court, however, gave no costs of this appeal, but ordered Mr. MAYHEW to pay all the costs incurred below—the costs of Mr. SUDBURY and of the official manager to be paid out of the estate.

The decision of the LORD-CHANCELLOR, on the 2d inst., reversing, on appeal, the judgment of Vice-Chancellor STUART, in the case of *Eades v. WILLIAMS*, involves two points of interest which are worthy of notice. The bill was filed by the plaintiff to enforce the specific performance of an agreement of the 11th of February, 1848, whereby it was provided that the defendant should have liberty to dig and work several beds of coal in the plaintiff's mines at a price, upon such terms, and for such number of years not exceeding 21, as should be determined by two persons named. They were to have full power, amongst other things, to fix a value on the mines, and, if the arbitrators did not agree within three weeks from the date of the agreement, the defendant was to be at liberty to work the mines at such a price and for such a period as should be settled by an umpire appointed by them. The arbitrators made their award on the 13th of April, 1848, finding that the defendant was to have the mines for 14 years, at the price of 400*l*. per acre. A draft of the lease, in pursuance of it, was prepared for execution, which was furnished to the defendant on the 10th of May, but he declared the award to be invalid, and accordingly refused to agree to its terms. He was at that time working the colliery, and although he threatened to stop, he did not finally cease until the following December. The defendant resisted the suit for the specific performance of the contract on the following grounds:—First, that there had been misrepresentation as to the quantity and quality of the coal, and that, in effect, it would not pay for the working; he, however, offered to enter into and abide by an equitable contract. It was also contended, on the part of the defendant, that the award was not the free award of the referees, in as much as one of them had, contrary to his expressed private judgment, signed the award for conformity sake, in accordance with the opinion of a third person, as to the value of the coal. The VICE-CHANCELLOR overruled both objections, and decreed that the defendant should, notwithstanding, specifically execute the agreement, and he directed that a deed for that purpose should be accordingly executed.

The LORD-CHANCELLOR, in his judgment on the appeal, after reviewing the facts and evidence, observed that the defendant was clearly entitled to a valid award, unless he had waived his right by acquiescence. The questions, therefore, for the determination of the Court, were—First, whether the award was a valid one; and, secondly, if invalid, whether the defendant objected to it in due time. As to the first, it appeared that the referees had consulted a person as to the value of the property proposed to be leased by the agreement, and that, in his opinion, 400*l*. an acre was a fair valuation. If this opinion had had the effect of convincing the referees of the value of the property, the award founded on that conviction could not be objected to. So far, however, from this being the case, one of the referees expressly stated that, in his judgment, the property in question was worth next to nothing, but that he had signed the award for the sake of conformity, and in deference to the valuation of the person so consulted. This could not, therefore, be deemed an unbiased decision of

the referees; and it could not be, consequently, considered a valid award. One substantial objection was as good as many, if it were made in time; and that question remained to be next considered. The objection did not appear to have been raised by the defendant until two months after he had been aware of the award, which was a considerable delay, and, probably, amounted to a waiver, if the plaintiff had not himself afterwards treated the matter as open to fresh negotiation, and thereby condoned any question of laches. This objection must, therefore, be also treated as a valid one, and also as having been, under the circumstances, raised in time. There was, however, another bar to the relief sought by the plaintiff's bill, which was founded partly on the agreement and partly on the award. It appeared that the plaintiff had not taken steps to enforce the agreement and the award until three years after the abandonment of the mines. This delay, according to all principle and all authority, was conclusive, as disentitling the plaintiff to the assistance of the Court in enforcing specific performance of the agreement. On both points, therefore, with all due deference to the opinion of the Vice-Chancellor, his judgment was erroneous, and must be reversed, by declaring that the plaintiff was not entitled to have this agreement specifically executed. Although the appeal was in this respect allowed, the plaintiff was entitled to an account of the coal actually raised by the defendant during the time that he worked the mines at the rate of 400*l*. per acre, as the defendant must be held by his occupancy to have adopted the rent fixed, at least, to that extent.

The determination of the Government, in accordance with the suggestion in our last Journal, to send forward a body of railway navvies and other civilian operatives to the Crimea, is a move in the right direction. Their practical acquaintance with the substrata lying beneath the crust of the earth, and their capacity of cutting through the solid rock, will, we venture to predict, render valuable service to the besieging army in their operations before Sebastopol. The avowed object of their mission is, we are told, for the purpose of making a tram railway connecting the little harbour of Balaklava with the allied lines; but once on the spot, they will, in all probability, be employed in other equally useful works. The facility with which the number required was immediately procured, and the earnestness with which those selected enrolled their names, is evidence of the spirit which pervades the men, and a test of the popularity of the service. Their efforts will, probably, be also directed as well to military mining under the fortifications as to making cuttings underground for the protection, and, perhaps, for the dwellings of the troops. We can well conceive the importance of affording shelter to the wooden houses now on the passage from England from the shot and shell of the besieged, and also from the storms so prevalent and so fearful on the shores of the Euxine. Whatever duties they may be directed to fulfil, the public may rest assured that they will bring to the performance of them great practical skill, untiring energy, and indomitable perseverance, and we feel assured that the country will be fully satisfied hereafter with the results of their exertions.

THE MAYNOOTH SINGLE FLUID BATTERY.

The Rev. N. Callan, of Maynooth College, has obtained from the Commissioners of Patents provisional protection for improvements in galvanic batteries. He has given notice of his intention to proceed with his application for letters patent, and the time allowed by the Commissioners for opposing his claims has expired. The patent, then, may be obtained, as a matter of course, in two or three weeks.

The first improvement consists in a new single fluid battery, which does not require either porous cells or nitric acid, and which is equal in power to Grove's, or any other nitric acid battery. It is proposed to call the new battery the *Maynooth Single Fluid Battery*, in order to distinguish it from the cast-iron nitric acid battery, which is known in England by the name of the Maynooth battery, and which is a two-fluid battery.

The galvanic batteries in common use, if they be considered in relation to their voltaic power, may be divided into two classes—viz., the nitric acid batteries, and those in which little or no nitric acid is used. The former are about 12 or 15 times as powerful as the latter, but they are liable to serious disadvantages. In all the nitric acid batteries, nitric acid and porous cells are indispensable. Nitric acid is objectionable—First, because it is very expensive; and secondly, because the use of it is accompanied with noxious fumes. Porous cells are also very objectionable—First, because the use of them is attended with considerable expense. Secondly, because the preparation of a battery which contains porous cells is very troublesome and tedious, and requires a good deal of skill in the manipulator. A single fluid battery, without porous cells, may be filled in the fourth of the time required for filling a nitric acid battery of the same size.—Thirdly, if the porous cells be not of a good quality, the nitric acid battery cannot be used for a long time without injury to the amalgamated surface of the zinc; for, in the course of some hours, a good deal of the nitric acid passes through the porous cells, and destroys the mercury on the zinc plates. If the porous cells be so thick and hard as to prevent the passage of the nitric acid through them, the resistance which they give to the voltaic current is so great that the power of the battery is considerably diminished, and is much inferior to that of the Maynooth single fluid battery.—Fourthly, all porous cells of the same kind do not transmit the voltaic current equally, and if, in a battery of 100 cells, there is one porous cell harder or thicker than the rest, the power of the battery current passing through the 99 good cells will be reduced to that of the current passing through the circle to which the inferior cell belongs.—Fifthly, the use of porous cells makes it impossible to use nitric acid batteries on railway trains, or on vessels at sea—first, because the porous cells would be broken or cracked by the motion of the train, or by the tossing of the vessel, unless they were thick and hard, and then the power of the battery would be comparatively small. Some years ago the electric light was exhibited, with a nitric acid battery, on a railway train in England; but the battery was so much injured that the experiment has never been repeated. Secondly, because the acids would be spilled if the cells were more than about half filled; for the mouth of the cells cannot be made water-tight. Porous cells of a good quality are more easily cracked than the thinnest window-glass, and, therefore, they will not bear the pressure necessary to make their mouths water-tight.

The single fluid Maynooth battery is free from all these disadvantages. Its power is not inferior to that of the nitric acid batteries, as appears from the following experiments:—The voltaic current from a single pair of the new battery, in which the zinc plate was about 4 inches square, produced a deflection of 82½° of the needle of the large galvanometer belonging to the College, the coil of which is 2 feet 1 inch in diameter, and is made of copper wire ½ of an inch thick. The current from a cell of the cast-iron nitric acid battery, in which the zinc plate was also 4 inches square, produced a deflection of 80½° of the needle of the same galvanometer. The porous cell of the cast-iron battery was of the best quality; it was left in nitro-sulphuric acid for nearly half an hour before the experiment, and the zinc was as near as possible to the iron. The cost of the exciting fluid in the new battery was about one-sixth of that of the acids in the nitric acid cell, and the new battery maintained its power longer than the other. Hence, the new battery is less expensive in use, as well as in construction, than the nitric acid batteries.

The new battery was discovered on the 6th of last June. On the 8th of the same month a battery of 72 pairs was shown in the College, before a large number of the students. The electric light produced by it was fully equal in illuminating power to any light ever produced by a cast-iron nitric acid battery of the same size. On the 4th of September, 182 circles of the new battery were exhibited publicly in the College. Their power of producing heat and light was enormous. In these two batteries at least one-third of the power was lost, on account of the imperfect arrangement of the elements, which was only temporary. A battery of about 300 4-inch plates, and another of 20 plates about a foot square each, are being made for the College. The former are intended for effects which require great intensity, such as intense heat and light; and the latter for decomposition and magnetic effects. In the new battery, the plates may be 2 or 3 feet square, if necessary. It is extremely constant in its action; and even when in full work, it may be carried by land or by sea. It is the only portable battery of great power that has been yet made. It will, therefore, be very useful in exploding mines, and in producing moving electric lights. It may be carried on railways, and by its means the engine may be furnished with an electric light, which will render the train visible in the darkest nights at a considerable distance. Many fatal accidents may thus be prevented. This battery may be of the utmost importance to the vessels of the fleet in the mists and fogs which they will have to encounter in the Baltic during the coming spring: 50 or 60 cells, in which the zinc plates are 3 inches square, or 3 inches by 4, will produce a most brilliant electric light, which, with the aid of Duboscq's or

ADVANTAGES OF THE SMOKE NUT.—It is stated by Mr. Wright, C.E., Government Inspector for the Smoke Nuisance, that there are upwards of three millions of tons of coals annually imported into London by sea and by railway, and, further, that at least one million of this quantity is annually consumed for manufacturing furnace purposes, and it is a well-known fact, established by practice, that by the better consumption of smoke, and obtaining more perfect combustion, 20 per cent. of fuel is saved, being 20 per cent. of one million tons amounting to two hundred thousand tons of coal saved annually, the nation, and that, at an average cost of 11. per ton, is 200,000*l.* saved to the metropolitan proprietors of furnaces and manufacturers, which would otherwise pass on in smoke, contaminating the atmosphere; but by this calculation, he asserts, becomes a twofold and total saving to the nation of 400,000*l.* per annum, and that without regarding it in a sanitary point of view, for as already the improved appearance of the London atmosphere is distinctly observable, as it is unnecessary to point out the injury inflicted upon the public health, or the pecuniary loss we sustain in the apparently trivial matters of soap and wear and tear of linen, &c., by the deposit of the large amount of carbonaceous matter always present in the atmosphere, inasmuch as smoke cooled is soot, but when heated to 600 deg. Fahrenheit becomes highly inflammable gas, and is consumed; therefore, every wreath of smoke that curls up a chimney is fuel wasted.

PARSEY'S PATENT REVOLVING PUMP.

Facts are always better than opinions. The latter are advanced by ignorance, prejudice, or counter-interests; while the former speak for themselves and silence all arguments; and it would be well for public improvement if they could command the preference. Circular motion has always been the aim of mechanics; and its attainment renders its adaptation to many important purposes not only facile, but publicly beneficial as improvements. The same engine may be used for steam, air, gases, or water, for which it was patented. These pumps raise water from a well as high as the atmosphere will support a column of mercury, and throw it with an unusual velocity. One of these pumps, 12 in. in diameter by 6 in. long, will raise and throw 85 gallons of water in 60 revolutions per minute without any suction or other valve—a perfection and qualification no other can claim.

For water-works, mines, fountains, farm purposes, fire-engines, ship's pumps, and domestic purposes, these pumps will be a considerable improvement and benefit, as, from their easy action, they may be made portable for hand labour in agriculture, &c., and in employing steam for quantities beyond manual strength, much less steam-power is required to throw greater quantities of water than is thrown by other pumps, with a saving of 25 per cent. in steam, and, consequently, in fuel. For brewers, and any hot liquor business, they are without rival, as there are no leathers or packing of any kind—all the parts working metal to metal, through which, hot or cold, the pump works equally well.

The simple and effective construction of the revolving pump is the same in all adaptations, and so perfect is the invention that it proves to be equally excellent as a steam-engine, a pump, an exhaustor, and a blower. This is not alleged, but practically proved; and may be seen on application to the patentee, No. 3, Crescent-place, Barton-crescent.

For ship's pumps they are fixed as when worked with steam, and do not require any valves; for by transmuting the discharge port, they cannot choke, which has been so great a perplexity. By turning the machine upside down, and syphoning the dip and rising main for throwing water to great heights, the benefit of a fall is had on one end of the lever to assist the other end, driven by the steam-engine, in forcibly discharging the water; and for fire-engines, extraordinary elevation, and rapidity of discharge, by air vessels, being attached to the rising main, as applied by the patentee, the same of hydraulics is obtained. As the motion is continuous, without the jump and unevenness of reciprocating buckets, these pumps are like double-acting pumps; and as the water follows the flyer from the dip-pipe, as it does the bucket of an ordinary pump, it only has to be thrown round the cylinder, like the bend of a pipe, without having to carry up the weight of water upon the bucket, the length of each stroke, which adds to the labour, or power, for working pumps.

RE-APPLICATION OF BACK WATER.—Supposing a mill, with a tolerable supply of water, or in unusual drought, should run dry, the mill must stop working, at a great sacrifice to the owner; but in such cases as may not interfere with the interests of others in the continuation of the stream, a re-application of the back water may be made in the following manner:—A mill is situated two or three miles from the Severn, supplied with water from the adjacent hills; after passing the mill the streamlet runs into the Severn, with a fall of (say) 10 feet, more or less, with no other mill application. If at no great distance from the mill a reservoir was made for the stream to gather in, by working Parsey's revolving pump, with a revolving, or any other good steam-engine, and raising the water by a main inclined to the height of the 10 or more feet required, a re-application of back water would not only be a security against the fatality of the drought of this year, but be a means of constantly economising the water-power of mills. Information and plans may be had on consulting Mr. Parsey, as above.

The Mariposa and New Granada Mining Company have convened an extraordinary general meeting, to be held on Friday, the 18th inst., for the purpose of receiving Mr. Gower's report of his visit to the company's mines at Mariposa and Santa Ana; of the purchase of the Parima Mines, and to adopt such measures thereon as may be deemed expedient; the meeting will also take into consideration the various matters stated in the requisition which appeared in the *Mining Journal* of Saturday last. The directors have received some interesting reports on the Mariposa from Capt. Eastman, head mining captain at the Mariposa Mines, and who has been for 27 years employed on that property; from Mr. Thomas Johnson, the superintendent of the Santa Ana Mines, and from Mr. Charles Johnson, the superintendent of the Mariposa Mines. Capt. Eastman states, that he proceeded to the Parima Mines, and on the 15th, 16th, and 17th of Sept., examined the various workings that are at present under operation. On the Elzevalde lode the workings are, at all appearance, on a champion lode, in all probability penetrating the very extensive hills (side of a hill) in which they are situated, varying in width from 2 to 10 feet, imbedded between two walls, inclined to a permanent and well-formed nature. The general appearance of the lode is of a favourable character for breaking; and notwithstanding the lode has as yet not been sufficiently opened out in extent to enable him to give any accurate estimate of the quantity of ore it contained, he might safely say that, at present, at least 20,000 tons are discovered, and by driving another cross-cut about 12 ft. lower, another 10,000 tons would, in all probability, be made available, if the lode holds in depth, which at all appearance it does. The Parima lode is a continuation of the above, but much lower, and further to the west; the ore does not present so favourable an aspect, but there are about 10,000 tons discovered. Finally, also, appears to be a continuation of the Elzevalde lode eastwards, and if so, the quantity of ore that can be extracted will be very great, the lode being about 5 feet wide, looking very favourable. On the Casique lode nothing had been done, it being removed too far from the mills to render the ore available. However, the aspect was good—lode about 3 feet wide. Capt. Eastman saw with great pleasure the encouraging prospects held out by stream workings, they, to all appearance, being rich and extensive. The mines are not quite in working order, but are daily improving. There are several necessary works still wanting, such as two new mills, a cross-cut on the Elzevalde lode, sundry repairs to the Aegula, all of which might be done for about \$5000. The cost of extracting, if tramways were laid down direct to the mills, would be about \$10 per ton, and the value of the ore per ton would be about \$10, taking good and poor on an average. Mr. Thomas Johnson states, from the cursory examination he had made of both lodes and Oro Corrida (stream-work), the company had reason to congratulate themselves upon having concluded a most advantageous purchase. The lodes have the advantage of being worked by means of levels, or adits, so that there will be no expense in the shape of machinery, for the purpose of extracting either mineral or water, and, by judiciously selecting the sites for any new mills which it would be found advisable to erect, the delivery of them may be effected at a very trifling cost. The trial which has been made of the Elzevalde lode is apparently of the greatest importance, in abundance on almost every part of the mountain, and when a further supply of water could be obtained, there was little doubt that from this source alone the company would in a very few years repay the capital invested in the purchase of these mines. The new works most pressing are the erection of a fifth stamping mill, immediately below the level in the Elzevalde Mine, whereby the carriage, now very costly, of this mineral to the other mills would be entirely avoided; the expense would not exceed \$3500 to \$4000, and probably would require six months to complete. Another is the bringing in the water of the San Antonio, in order to enable them to extend the workings in the Oro Corrida Mines, which might be effected at an outlay of \$10,000 or \$12,000, making in the whole about \$16,000, which would be spread over a period of a year. Mine captains would not be required as yet, the works being upon the very simplest plan, and any advice or assistance required could always be procured from the Mariposa Mines. Mr. Charles Johnson, after fully confirming in detail the report of Capt. Eastman, and stating that at the present there were three stream works in operation, giving on an average jointly from 5 to 6 lbs. of gold per month, concludes:—"Of course, the company will be put to some expense at first, as several very necessary repairs are required on the Aegula, also the erection of two new mills, and the general opening of the mines. This may take \$12,000; but when these works are finished, I think that the Parima Mines will prove themselves to be a lucrative source of income to the Mariposa and New Granada Mining Company, and that the company will never have to regret their having given full sanction and authority to the able director they sent out to set for them, and who has concluded this business on so very favourable terms for the company, after the many difficulties he has had to overcome in securing these mines for the company."

We have advice from Mariposa to the 20th of October. About 4 tons of the McElroy's quartz vein have been taken, to the Mount Ophir Works, where it will be exposed to a scientific test to demonstrate its value. The miners on the Merced, in the vicinity of Sherlock's and Washington Flats, are doing a thriving business. At Mariposa Bar, a short distance below Mariposa Bar, on the Mariposa, several claims are paying well. Sherlock's Flat pays from 10 to 15, bottom—rather coarse gold, averaging from 8 to 15 to the pan, and from 30 to 50 of washing dirt.

In America, a great impression has been produced by the stoppage of Reeves, Buck, and Co. the largest manufacturers in Pennsylvania. The liabilities of the house are stated at different amounts from 200,000 to 300,000, while their annual assets are represented to reach from 300,000 to 400,000.

The Granger has arrived in the Downs from the Cape of Good Hope, with 124 tons of copper ore on board.

At the Auction Mart, some Westminster Improvement Bonds, of 5000 each, were sold at 1574 and 1890, per bond.

THE NEW GRANADIAN LAND AND TRUST ASSOCIATION.—A prospectus has recently been issued to establish a company under the title in France, as a society in command, by which the responsibility of shareholders is limited to the amount of their subscriptions. The capital proposed is 100,000, in shares of 10, each, or 25 frs., of which 50,000 are now to be subscribed for, with 10 frs. per share paid, no further payment to be made within one year, or until the Executive Government of New Granada shall have legally transferred to the association the rights and privileges mentioned in the decree of the Legislature for the redemption of the bonds. A preliminary survey will be made, in order to select allotments, and to ascertain the value of agricultural products, timber, minerals, and other natural and intrinsic advantages of the property granted to the association. The committee have determined to confine their proceedings to the primary arrangements now in progress; while they view a small preliminary capital only will be raised by the present allotment of 50,000 shares, the residue being reserved for the concessionaires of this important undertaking.

WEEKLY LIST OF NEW PATENTS.

WEEKLY LIST OF PATENTS REALED.

J. H. Young, Railway; C. F. Stanbury, Machinery for making lock springs; J. M. Parsons, Railway axle bearings; L. N. Langille, Steam-boilers; J. H. Abadie, Mode of working screw-propellers; D. Gaudin, Puddling-furnaces; J. H. Lazenby, Railway brakes; A. Warner, Combining metals; W. H. Meriwether, Wrought-iron poles for fences; P. J. Bramwell, Steam-engines and steam-hammers; G. H. Ingham, Communication between passengers and guards; J. J. Platt, Black-siding machinery; W. E. Bates, Propelling vessels; W. Low, Ventilating chimneys; G. J. Beardsley, Preventing incrustation in steam-boilers; H. Knight, Treating iron as to its capacity for receiving magnetism; W. Beasley, Gun-barrels; E. Hunt, Screw-propellers.

APPLICATIONS FOR PATENTS, AND PROTECTION ALLOWED.

J. Bourdier, Shorter-street, Islington—Improvements in machinery for washing, boiling, cleaning, and bleaching rags, fabrics, and textile substances; J. Mansfield, Stoke, Stafford—Improvements or improvements in steam-boilers; J. Lamberton, W. Wright, and T. Davis, Halifax—Improvements in machinery or apparatus for raising water and other fluids; J. Farrell, Dublin—Improvements in fire-proof flooring and roofing, which improvements are also applicable to the construction of walls and bridges, and other like structures; J. Bratton, Gower-street—Improved method of roofing or covering buildings, reservoirs, and other spaces requiring roofs or coverings.

GOLD MACHINERY.—Messrs. Ramsomes and Sims, of Ipswich, having satisfactorily tested the capacities and efficiency of Dr. Collyer's quartz crushing and amalgamating machine for the last five months, at their works, on large quantities of ore, have decided on erecting it in London at an early period. This machine has the advantage of extreme simplicity—the improvement in the amalgamating department, whereby a large quantity of the reduced ore can be acted on, with the certainty of extracting the finest particles of gold it may contain. The objection urged by some against the weight of the parts composing it has been remedied in the largest size machine; no one part need exceed 4 tons in weight. Every mechanic is aware that it is essential to have as few pieces as possible, in order to ensure permanency. Messrs. Ramsomes have so constructed the crushing and triturating cylinders, that when, after long use, the parts become worn, they can be at once replaced by chilled shoes. This is a great advantage, as when the machine is in the same condition as when new. The expense attending the removal of parts is trifling, in comparison with the great amount of work done, and the expenditure of so little power. We understand the machine will be erected at Millwall, where several hundred tons of gold-bearing quartz have been contracted for, to be operated on.

INVENTION FOR ECONOMISING AND EXPANDING GAS.—The gas bill of the country amounts to some millions per annum. It becomes, therefore, a question of great interest, how to economise the gas, and to expand it, so as to be used with a saving of light. Mr. Jackson's invention, which was exhibited before the Polytechnic Society, on Monday evening, meets the case precisely. By inserting a slightly twisted platinum wire over the orifice of the burner, and within the gas flame, he largely increases the illuminating power. According to experiments made last week at the Liverpool Gas Works, in the presence of the chairman and Mr. King, the new apparatus effects a saving of from 17 to 20 per cent. In the manufacturing districts, where so large a quantity of gas is consumed, Mr. Jackson's invention will be most warmly appreciated. *—Liverpool Times.*

THE IRONFOUNDRIES OF GLASGOW.—The means of turning out castings of every description in this city have been greatly increased during the last two years, as nine new ironfoundries have been built during that time, and only four taken down. The number of foundries now in good repair, and full working order, Glasgow has, and in all Scotland, is 112, in all, 162. The quantity of castings which these foundries can now turn out annually is immense; particularly for railway, water, and gas works, buildings, and bridges.

RAILWAY TRAFFIC RETURNS.

Subjoined are the traffic returns of the various English lines for the last week:—

	1854.	1853.
London and North-Western	248,297	246,030
London and York	18,471	16,970
London and South-Western	10,153	9,871
London and Brighton	10,527	10,318
Midland	25,480	23,852
Great Western	19,468	19,155
Great Eastern	18,635	18,306
Great Northern	21,835	21,716
Chester and Holyhead	4,661	3,480
North-Eastern	28,085	25,238
Manchester, Sheffield, and Lincolnshire	9,631	7,802
East Anglian	820	898
Eastern Counties, Norfolk, and Eastern Union	30,033	18,133
Great Eastern	4,824	4,378
Bristol and Exeter	5,090	4,260
Exeter and Crediton	125	113
Shropshire Union	700	562
Birkenhead, Lancashire, and Cheshire Junction	1,930	1,691
Oxford and Worcester	2,726	2,149
Newcastle and Carlisle	3,253	2,735
Shrewsbury and Chester	1,875	1,570
South Yorkshire	1,594	1,481

These figures show the following aggregate results (taking only the corresponding lines):—

	Receipts.	Miles open.	Average per mile.
1854	£254,324	4604½	£55 4 7
1853	230,418	4567½	50 9 6

This general comparison is highly favourable. At the corresponding period of last year the traffic of the Lancashire and Yorkshire Company was unfavourably affected by the strikes in the manufacturing districts.

The returns on Scotch lines are as under:—

	1854.	1853.
Aberdeen	£2,017	£1,514
Caledonian	11,340	16,177
North British	4,338	4,031
Glasgow and South Western	5,430	4,440
Edinburgh and Glasgow	4,661	4,777
Scotch Central	2,279	1,994
Total	£50,065	£37,093
The Irish returns are:—	1854.	1853.
Belfast and Ballymena	£740	£675
Belfast and Down	198	190
Cork and Brandon	213	191
Waterford and Kilkenny	213	109
Londonderry and Enniskillen	213	416
Londonderry and Coleraine	213	194
Total	£2,093	£1,837

RAILWAY TRAFFIC.—The traffic returns of railways in the United Kingdom for the week ending December 24 amounted to 332,903, and for the corresponding week of last year to 306,799, showing an increase of 23,194. The gross receipts of the eight railways having their termini in the metropolis amounted for the week ending as above to 146,077, and for the corresponding week of last year to 134,317, showing an increase of 11,761.

The Eastern Counties Railway amounted to 186,911; on the Great Northern to 41,912; on the Great Western to 31,011; on the London and North-Western to 22,774; on the London and Blackwall to 911; on the London, Brighton, and South Coast to 81; on the London and South-Western to 222; and on the South-Eastern to 1343; total, 11,784.

The receipts on the other lines in the United Kingdom amounted to 166,996, and for the corresponding period of 1853 to 166,496, showing an increase of 20,410, of the receipts of those lines; which, added to the increase on the metropolitan lines, makes the total increase 32,194, as compared with the corresponding week of 1853.

RAILWAY CALLS.—The amount falling due in December is 197,940, against 161,466, in the corresponding month of last year. The total called during the year now about to terminate has been 13,101,642, against 11,288,273, in 1853.

DISCOVERY OF SILVER IN CHILE.—Intelligence has been received from Copiapo, by the steamer *Magdalena*, of an extraordinary discovery alleged to have been made in the neighbourhood of a place called Chancocillo, one of the rich silver districts in that part of Chile. Some poor woodcutters, it is said, were engaged in cutting and collecting wood on the hills, when the axe of one of them struck something hard, but as the substance had a softer sound than a stone, he cleared away the rubbish to ascertain what it was, and found a vein of nearly solid silver. Along with his companions, he continued the examination, and discovered that there were four veins, all distinct and large. The consequence was that the city was almost deserted, several thousand miners, rich and poor, having congregated upon the spot; and as they had remained several days, no doubt was felt that the value of the discovery had been confirmed.

SOUTH AUSTRALIAN COPPER MINING COMPANY.—We alluded last week to the recent important discoveries made at these mines, and the *Adelaide Times* of the 26th September, in forwarding generally on the mineral resources of South Australia, says:—"Scarcely a week passes without bringing news either of fresh discoveries or of the successful working of already existing mines." Mr. Basset, the active and intelligent superintendent of the Strathbryn Mine, of opinion that the eastern districts will become as fine a copper-yielding country as any in the world; that its silver-productive veins bids fair to rival that of Mexico, and that that metal will eventually form one of the staple articles of South Australian produce. The successful working of the Strathbryn Lead and Silver Mines, under the management of that gentleman, may be taken as a fair indication of what may be expected in the direction referred to. Some idea of the prospects of the works may be gathered from the fact of the lode which was discovered under the superintendence of Mr. Basset, by sinking a shaft 3 or 4 fms., through a large iron granite lode, a magnificent lead and silver-bearing gossan exhibited itself, from 10 to 15 feet in width; and upon driving upon this a very rich carbonate of lead, containing a considerable percentage of silver, was obtained. On the floor at the mouth of the mine there is about 130 tons of rich ore, raised merely from the works executed in driving the levels. It is intended almost immediately to stoppage several hundred tons more of the same quality ore. Large portions of the lode are estimated to contain from 60 to 65 per cent. of lead, and from 20 to 25 per cent. of silver. The average of the whole lode, roughly broken in driving, is estimated at 40 per cent. of lead, and 35 per cent. of silver. Some courses of the ore have given as much as 100 per cent. of silver to the ton, and every portion of the lode yields silver. Experiments have been made in smelting, and a ton or two of pig-lead has been smelted, which has yielded nearly 250 ozs. of silver to the ton of lead, but, owing to the want of experienced smelters, it has been deemed prudent to suspend operations, and ship the ore in its crude state, either at Milang, Lake Alexandria, or at Port Adelaide. A new copper mine had recently been discovered near Kamberton, in the district of Nairne, known as the Presinnian Mine; many of the specimens contained 60 per cent. of copper, and some as high as 60 per cent.

ON SCIENCE IN THE MINES.—No. III.

BY HERBERT MACKWORTH, M.D., F.R.S., INSPECTOR OF COAL MINES.

To Humboldt, in 1798, the miner is indebted for a safety-lamp to enter poisonous gases, of which he thus writes—"No fear need be entertained of igniting explosive gases in mines in using this lamp, which is supplied by a reservoir of common air." But it is to George Stephenson and Davy that we owe the splendid invention, in 1815, of the present convenient safety-lamp for working mines which give off carbonated hydrogen. It has now sustained a trial of nearly 30 years, at least in the North of England, without one well-ascertained case of failure. All statistics combine in showing that its universal introduction would alone render the miner's most deadly enemy almost powerless to destroy.

The ventilation of English metallic mines would seem to be one of the special missions of the winds of heaven, for there the science of ventilation is almost unknown. The small effect due to natural ventilation is nearly lost by allowing the air-galleries to become contracted, or the air to leak away from one shaft to the other, by the shortest way it can find, so that hardly any power is exerted to the extraneous of the mine, where the hard work is going on. For a century, or more, furnaces have been applied to the bottom of the shaft, where the air is intended to ascend, called the up-cast shaft, and they are now common in coal mines. They heat and rarify the air so that it ascends the shaft, while cold air necessarily descends another shaft to supply its place. An ordinary room, with a fire and chimney, presents an exactly analogous case. The air from the outside descends through the doors and windows, by the shortest course, to the chimney, and in a mine these currents have to be turned aside and directed so as to traverse every part, and each of the points where the men are at work. The quantity of air which enters the mine, and the distance it has to travel, is upwards of 500,000 cubic feet per minute, equal to a cube of air of which each side measures 60 feet in length. Twelve tons of coal are consumed by the three furnaces every 24 hours. In Belgium, where the science of ventilation is better understood than in England, the furnaces are being replaced by machines which pump out the air. The number of such ventilators already amounts to 182, driven by steam-engines of the quietest power of 2200 horses. They are not only free from the danger of exploding fire-damp, but are more regular in their action, more under control, and more economical than furnaces. It seems, on the whole, as we stood in the same relation to the Continent in respect of mining, as we do in manufactures generally. Necessity and energy have triumphed amongst us over the more important difficulties, and from us they have hitherto received the most essential improvements. They are ever on the watch, and eagerly adopt each step of our progress, and we should certainly be wanting in commercial enterprise if we fail to appropriate the science and refinements by which they are rapidly compensating for their deficiencies in the raw material.

We have much to learn in regard to the safety of mines, in boring, in machines for raising men, in the extraction of the whole of the minerals, and in coaling. Within the last 30 years the labours of D'Oyryhausen, Depoussé, and Kind, have raised boring to the rank of a mechanical science. Faville, by his system of hollow-roads, and a current of water to clear away the debris, bored, at Perpignan, 183 yards in 23 days. Molot, encouraged and advised by Arago, persevered with the well at Grenelle, from 1833 to 1847, till it attained a depth of 600 yards, and yielded 740,000 gallons of water per day. Borings for salt springs to 764 yards have been executed by Kind, the so-called "Napoleon" of borers. He has also bored shafts of 14 ft. in diameter, and at Hambourg is now executing a boring to a still greater depth, to obtain water of a sufficient temperature for hot baths without the cost of re-heating it.

A memorable stimulus was given to improvements in mining in Belgium by the premiums awarded by the Royal Academy of Sciences in 1840, since which time greater progress has been made in the application of science to mining than in any other country in a similar period. The production of coal in 14 years has increased 117 per cent., the number of workmen by 53 per cent., and the price of coal has diminished from 11s. to 6s. 8d. per ton. We shall not be surprised at such a result, if we consider the training of the leading engineers of that country as well as of France. The first pupil at the University of Liège, and the Ecole Polytechnique at Paris, what we should call a senior wrangler, enters each year the Ecole des Mines at those places. A three months' course of instruction in the sciences, and several years of practical examinations, qualifies the pupil as an aspirant engineer. He is then employed constantly in visiting and reporting on mines, or he takes the management of private works for periods of five or ten years. The wisdom of those two countries has selected their highest talent for the promotion of the interests of mining; it combines the best practice with the highest science, and is forming a body of men to whom may be safely referred for solution the wants and the difficulties which affect the art of production in all its branches. The able work of Inspector General Combes, on the exploitation of mines, the accurate investigations and descriptions of practical studies, and the papers of other countries, given in the *Annales des Mines* and *Annales des Travaux Publics*, would testify to the ability of these engineers, even were they wanting in the names of Dufrenoy, Elie de Beaumont, Rognault, Le Play, Gonot, Dumont, and Mueseler.

In giving a hasty sketch of the efforts which have been made to introduce mining education, the first place must be conceded to the Academy of Freiberg. Although lectures were given by Dr. Henckell, in his own house till 1744, the school was not founded till 1765. It attained its greatest celebrity in 1775, under the famous Werner. Pupils are to be found there from distant countries—Spain, Russia, and the Brazils. Some of the leading professors of mining and metallurgy in this country have been students of the education it affords. The subjects are taught by lectures, illustrated by diagrams, by experiments, by models, and specimens. One day in the week is spent in the mines, coal, iron, tin, &c., of which there are 100 within three miles of Freiberg. Besides the higher classes, there is one for managers or captains, of whom the number is restricted to 40. The course consists of arithmetic, geometry, art of mining, elementary mineralogy, grammar, and drawing. For an account of the other celebrated schools of Tarnowitz, Soemnitz, and St. Etienne, and the experience to be derived from their past history, a pamphlet just published by Prof. W. Smyth should be referred to. The mining schools at Liège and Paris, established in 1810, to which I have already alluded, are of the highest scientific character. At Liège, in the department du Gard, a school for master miners, under the direction of M. Etienne Dupont, affords some useful suggestions for the class of mining schools which are chiefly required in this country. The director says—"This school has an essentially practical object; the certificated pupils are workmen who can be formed into managers or master miners. Only workmen above the age of 16 years, who have worked in the mines for at least a year, are admitted. The attainments required for entering are—reading, writing a running hand, the four first rules of arithmetic, and elementary geometry. Useful manual instruction at present is, as a centre for mining information, it can yet hold a still more distinguished position as the active support of the mining schools which are now being formed in the principal districts. An interesting account is given of its formation in a report made last year, by M. Coquiel, to the Belgian Government, on Industrial Education in England. He says—"The School of Mines and of Science applied to the Arts, projected in 1839, was not inaugurated till 1851. Previously no institution existed in the United Kingdom where the different sciences, applied to the exploitation of mines, were taught. It is surprising that a country whose riches and prosperity are due, in a great measure, to mines from which minerals are produced amounting to the annual value of 84 millions sterling, and to nearly 4-5ths of the whole produce of Europe—and from whose soil is extracted annually more than 35 million tons of coal alone, has not thought of furnishing to the numerous population occupied in working its mines the means of acquiring the most elementary scientific notions of their art. And yet the industry of which we speak is precisely that which can least do without scientific knowledge. The help of geology and chemistry is required to discover the formation, and determine the nature of a mineral; that of physics and mechanics for the exploitation, strictly speaking, of the mine; that of metallurgy to treat the metal when it is extracted from the earth. At present, the only instances of institutions of this kind in England are the Mining Academy, which may not only occasion the death of miners, but the loss of human capital, or, at least, deprive capitalists of the advantages which a more intelligent mode of working would have assured to them. Might it not be said that the English, to whom nature has been so generous, so prodigal, act somewhat in the same way as those southern nations to whom heaven has given warmth and food almost for nothing, and who had rather fold their arms in the face of these favours, than apply their intelligence and their strength in profiting by them? Indeed, all the countries of Europe, less gifted than England in respect of mineral riches, have established schools to compensate for that respect in a probable position by improvements in the system of working. That which creates the most surprise is, that the companies and proprietors of mines, so rich, extensive, and numerous as they are in Great Britain, have not established schools from which they might themselves derive the greatest advantages. They had before them the example of the immortal Watt, who having obtained a patent for the ingenious improvements which he had introduced into the steam-engine, established at Soho, near Birmingham, a 'preparatory school,' in order to teach the workmen not only the new series of works which he was about to intrust to them, but the principles of the operations themselves—drawing, measuring, adjusting, &c. A single example, in his case, a school of mines, was made in Cornwall by Sir Charles Lemon. In 1838 he established, at his own cost, a school of mines, with the object of showing to the proprietors of similar establishments. The school went on for two years, and Sir C. Lemon offered to the mining interest of the county of Cornwall a sum of 10,000, if on their side they would give a similar sum, to found a permanent school. Neither the county nor the mining interest responded to this appeal, and the school was given up. During the two years of its existence it afforded instruction to 17 young men, whose subsequent history has been ascertained. Almost all have arrived at superior positions, and occupy a recognised place in society. They are anxious to acknowledge that they owe to the success to the school founded by Sir C. Lemon. What eloquent pleading in favour of professional education!"

Just as it is desirable to take the opinion which others entertain of us rather than our own, it is sometimes very useful to see if we can learn something from the opinion of an intelligent foreigner; and while the most desirable part of the education in our mining schools should be the imparting, with accurate details, all the best examples of practice in our own land, I trust that those who have the direction of our future mining schools will not neglect to appropriate all that is advantageous in foreign mines.

As an example of an accurate description of a mining process, such as we require, I refer with pleasure to a description of tabling shales, by a "Newcastle Collier," in a recent number of the *Mining Journal*. It is too long for quotation. For descriptions of foreign mining, the work of Mons. Combes, and the *Annales* before mentioned, can be consulted with confidence. There are four institutions in Great Britain which must not be overlooked, but which, without including any special instruction in mining, have furnished much valuable knowledge to those engaged in its pursuit. I mean the Universities of Dublin, Edinburgh, Durham, and London. The department of applied science was established at Durham in 1838, at King's College, by the exertions of three eminent professors, Mosely, Hall, and Daniel, in 1831. The two former gentlemen gave their services to Sir C. Lemon's school, and the latter, the Inspector of training schools, is now actively engaged in forming schools of practical science, or, as they are called, "trade schools." Another of Her Majesty's Inspectors, the Rev. J. P. Norris, has been instrumental in forming, on the suggestion of Mr. Tremereere, five prize schemes, in the mining districts of Staffordshire and Cheshire. Their object is to induce the parents of children (in a district where high wages offer powerful temptations) to keep them at school after ten years of age, and for a longer period than the average—15 months. Two conditions he finds to be essential.—1. That the prizes should not be attainable without positive effort on the part of the candidates.—2. That they should be of such a kind as to make a lasting impression upon the child, and so large in amount as to carry with them, per force, a sense of increased responsibility.

At the Dudley examination, last year, there were 130 competitors, from 11 to 14 years of age. The prizes are provided by subscriptions amounting the proprietors of works. Although this is a successful method of improving elementary education, I think we may fairly expect that by offering instruction to boys or men, by which they

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MR. LEE STEVENS'S PATENT FURNACES.—As the value of inventions can be best estimated by the successful nature of their application, Mr. LEE STEVENS's patent furnaces are referred to as an important class of Engineering, Manufactures, Breweries, Soap-Makers, Chemists, Dyers, Printers, Confectioners, Bakers, and others, in proof of the practical utility of his SYSTEM OF SMOKE PREVENTION AND ECONOMY OF FUEL, adapted to all varieties of furnaces, and to which daily additions are made. And strictly maintaining his own patent rights, he GUARANTEES his FURNACES against any pretensions on the part of others. Copies of reports and testimonials, with information respecting licenses to manufacture or use the PATENT SMOKELESS FURNACES, may be obtained of the patentee, J. Fish-street-hill, City.

SNOKELESS FURNACE, COMPLETE COMBUSTION, AND ECONOMY.—The legislative enactment for the suppression of the smoke nuisance, rendering it compulsory on the part of furnace proprietors to adopt the best means for its abolition, C. J. FOX calls the attention of the scientific public to the PLAN PATENTED by Messrs. ELMERIE and SIMPSON, of which he is the SOLE LICENSEE, as being THOROUGHLY EFFICACIOUS, causing a LARGE SAVING IN FUEL, and as one of the most SIMPLE and ECONOMICAL in first cost yet offered to the public. It can be fixed in a period in no case exceeding a day, and without any disturbance to the furnace. Full particulars may be obtained of C. J. Fox, engineer, 4, Piccadilly, City-road, where testimonials of its successful success may be seen.

COLLEGE OF INDUSTRIAL SCIENCE, NEVILLE HALL, NEWCASTLE-ON-TYNE. ASSAY OFFICE AND LABORATORY under the direction of Dr. THOMAS RICHARDSON and Mr. J. C. BLOWELL, assisted by Mr. W. CROWDER. The LABORATORIES are OPEN DAILY, from 9 A.M. to 5 P.M., where instruction is given in every branch of Assaying, Analytical Chemistry, and Chemical Research. Fee for Twelve Months, £32 10s. ANALYSES and ASSAYS of NATURAL and MANUFACTURING PRODUCTS, such as Ores, Soils, Waters, Gases, Metals, Coals, Artificial Manures, Alkalies, &c., are made on moderate terms, and the commercial value estimated when required. INVESTIGATIONS and EXPERIMENTS for IMPROVING MANUFACTURING PROCESSES carried on in conjunction with the proprietors. A COURSE OF ONE HUNDRED LECTURES on GENERAL CHEMISTRY delivered during the Winter Session at the College of Medicine in connection with the University of Durham, to which the laboratory students have free admission.

THE LLANBERIS SLATE AND GWYTHYRIN FLAG QUARRYING COMPANY, CARNARVONSHIRE AND DENBIGHSHIRE. Completely Registered, and in full work.—Capital £10,000 of £1 each. BANKERS—Messrs. Williams and Co., Carnarvon. Applications for further information, and for the remaining shares, may be made to Messrs. WILLIAMS, the bankers; or to Mr. JOHN LLOYD, county surveyor, Carnarvon, secretary and manager.

CARBERRY WEST MINING COMPANY OF IRELAND.—At an ADJOURNED GENERAL MEETING of the shareholders and scripholders, held at the offices of the company, Adelaide Chambers, Gracechurch-street, on Wednesday, the 29th November, 1854. It was unanimously resolved:—That Messrs. Peter, Tinsley, Foley, and Lucas, be appointed a committee to take charge of the deeds, scrip, furniture, and other property belonging to the company, and that all operations be suspended for the present; such committee to communicate together from time to time, with a view to the resuscitation of the mine at a future period. By order, C. M. MANLEY, Sec. Adelaide Chambers, Gracechurch-street, Nov. 30, 1854.

WHEAL MESSER.—At a MEETING of shareholders, held at 13, George-yard, Lombard-street, on Friday, the 1st December, J. V. WATSON, Esq., in the chair. The accounts, which were submitted, showed a balance of liabilities against the mine to the end of November of £2865 1s. 11d. A call of £5120, or £20 per (250th) share, was made, payable in 10 days, and a discount of 5 per cent. to be allowed to those who pay up within that time. Capt. James Scoullie was appointed joint manager with Capt. Poigesse. The following report of the committee was received, and entered on the minutes:—

REPORT OF THE COMMITTEE. Dec. 1, 1854.—The committee in presenting their report of the present state, the general position, and the financial position of the mine, beg to remind the shareholders that at the last meeting, which was adjourned to this day, the manager, Mr. Williams, informed them there were four lodges in the mine, which would be seen at deeper levels before the 1st of December; and if by that time they had not placed the mine in the position to justify all his reports upon it, would at once resign the management.

Of these four lodges, one only has been seen; although the greatest exertions have been made to cut the lodges before this meeting. Captain Poigesse, who is present, will enter into any explanations required respecting these points; but, as they have had a material influence on the committee in framing their report, and in recommending for your consideration the future operations of the company, they beg, in order that you may understand the true position of your property, to refer to them here.

The first point was, the Messer lodge in the 40 ft. level. You are aware that down to the 30 ft. level had been very productive, having yielded the present company 900 tons of ore; and as our operations for several months had been, at great expense, sinking Mitchell's shaft to the 40 fathom level, it was one source of anxiety to see the lodge opened upon at this depth. This has been done, and, according to Capt. Poigesse, there is now a promising lodge in the end; whilst a worse being sunk from the 30 to the 40, several fathoms before the end, is yielding 3 to 3 tons per fathom, thus indicating we are driving towards a shoot of ore which was so productive above.

The second object was, the Tretail lodge. This lodge you were informed had been exceedingly rich in the adjoining mine, realising £40,000 worth of ore in a short time, and had been worked into the Messer set, where it was said to be standing, worth 1½ ton of ore per fathom. To render this lodge available to us, a level has been driving with all speed to communicate with the Tretail workings, but this has not yet been accomplished. Capt. Poigesse states, however, that he expects the communication to be made every hour; and from all the committee can gather—seeing that this lodge runs through Messer set for a considerable distance—they have reason to think it will open to the company a fair, if not considerable, quantity of ore.

The third and fourth points were, cutting Williams north and south lodges 10 fathoms below the adit. These have not yet been cut. These lodges have been, and are still, productive at the adit level; and in the opinion of some shareholders who have inspected them, are the most promising in the mine.

In driving the adit level since the last meeting, a new lodge, never before seen in the mine, has been discovered, and which Capt. Poigesse thinks of good promise.

In regard to the financial department, it appears to the committee, that there has been great extravagance in the expenditure, but not such as to render the shareholders that they possess a large and expensive plant, consisting of three steam-engines, and other necessities for a large and productive mine. The want of common prudence, in not waiting the result of deeper levels in the mine before going to this extravagant outlay, is a matter which, however much it may be regretted, cannot now be remedied.

The greatest deception which has presented itself to the committee, and through which the financial position has become so deplorable, is the state of the mine at the time the large engine went to work. It was well known to all that large quantities of ore had been raised above the 30 ft. level, and statements were made by the manager and Capt. Poigesse, that still larger quantities, in fact, more than sufficient to meet the current expenditure, would be raised by the months of May and June. This proved to be false; all available ore ground had been taken away, and consequently, for many months the company's operations have been carried on at great expense, in sinking three shafts, &c., to discover and lay open ore ground which they had been led to believe was standing in the mine at the time the works were flooded, last autumn; so that, instead of finding copper ore to meet current and unavoidable expenses, calls, which otherwise would have cleared off all debts for machinery and supplies to the mine, have been barely sufficient to meet the costs of working during the last ten months.

The committee having thus endeavored, from a thorough investigation of your affairs, to lay before you your true position, would further remark, that it is their opinion, from the present state of the mine, and the prospects of the lodge, which may be seen at deeper levels before many days, that it is well worthy of a spirited but economical working. By reducing the cost to £300 a month, or as near it as possible, the mine may be able to meet the greater part of the outlay, whilst, should the other lodges turn out according to reasonable expectations, early profits may be made.

They would strongly recommend, therefore, that the mine should be placed in a proper and independent position, that every claim upon it should be at once paid off, and a balance put in hand, that many of the materials may be purchased at cash, and at a cheaper rate. Capt. Poigesse will inform you that by an outlay of £150 for a crusher and tramroad in the mine, the returns can be increased and the expenses diminished. At the last meeting, the liabilities of the mine were £2543 14s. 10d.; since which a month's cost (£575 17s. 3d.) has been paid; and assuming in addition that the next cost, not yet due, would amount to £500, the total of every liability on the mine to this day would be £3615 11s. 11d.

To place the mine, therefore, in the position which the committee recommend would require a call of £20 per share; and they propose that if made, a discount of 5 per cent. should be allowed to those who pay it within ten days. The staff of assistants should be reduced, and a general manager appointed. The committee also strongly recommend that no manager or agent of the company be allowed, for the future, to hold a share in the mine. And that Mr. Boase be instructed to proceed in the Stannaria Court against all those in arrears of calls.

Signed, R. F. LANCELLES JENNER, W. FAWCETT, J. V. WATSON, J. EDWARDS, THOMAS CAMPBELL.

NOTICE TO INVENTORS.—NEW PATENT LAW. PATENT OFFICE, 4, TRAFALGAR SQUARE, CHANCERY CROSS. The "CIRCULAR OF INFORMATION," and Plain Instructions for the Protection of Inventions in the United Kingdom or foreign countries, MAY BE HAD GRATIS by applying personally, or by letter (pre-paid), to Messrs. PATENT and Co.

NEW PATENT ACT, 1852.—Mr. CAMPIN, having advocated the Patent Law Reform before the Government and Legislature, and in the pages of the *Mining Journal*, &c., is now READY TO ADVISE and ASSIST INVENTORS in OBTAINING PATENTS, &c., under the NEW ACT. The Circular of Information, gratis, on application to the Patent Office and Design Registry, 156, Strand.

PRACTICAL MECHANICS' JOURNAL. Part 81. December. Price 1s.—Illustrations: Large folio Plate of Messrs. Scott, Sinclair, and Co.'s New Screw Propellers, and 30 Wood Engravings.—Contents: Royal Society; American Notes, by our own Correspondent; Boring Arbor; Steam Cock; Tool Block; Locomotive Performance; Railway Ventilation; Educational Exhibition, Report of Committee on Art; Davidson's Floating Breakwater; Messrs. Scott and Sinclair's New Screw Propellers.—Illustrated Specifications of Recent Patents: Portable Wooden Bedsteads, Brown; Knife Cleaners, Hilliard; Railway Timber Truck, Essie; Centrifugal Cloth-Drying Machine, Johnson; Ornamentation of Pottery and Glass, Hale and Lucas; Medicinal Gas Administrator, Barthelemy; Engraving, Aston; Washing Machine, Patterson; Steam Washer, Johnson; Bore of New Boats; Presenting of Ice Slices; Monthly Notes; Lists of all New Patents.—Hobart, 85, Chapside; Editor's Office (Office for Patents), 47, Lincoln's Inn-fields.

RAILWAY WAGGONS.—WM. A. ADAMS, MIDLAND WORKS, BIRMINGHAM. BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGGONS. IN STOCK.—FOR SALE OR HIRE.

GRIFFIN AND HENSON, RAILWAY CARRIAGE AND WAGON BUILDERS, SOHO, BIRMINGHAM. MANUFACTURERS OF EVERY DESCRIPTION OF IRONWORK FOR RAILWAY CARRIAGES AND WAGGONS.

RAILWAY WHEEL AND AXLE WORKS. GEORGE WORSDELL AND CO., WARRINGTON, MANUFACTURERS OF EVERY DESCRIPTION OF HAMMERED IRON, TYRES, AXLES, &c.

THOS. SPENCER, VULCAN IRONWORKS, WEST BROMWICH, STAFFORDSHIRE, MANUFACTURER OF RAILWAY WHEELS AND AXLES, SCRAP TYRES AND AXLES, ALL KINDS OF HAMMERED IRON FOR MARINE AND OTHER ENGINES, SHAFTS, AND HEAVY IRONWORK.—SOLE MAKER OF CAMBER'S PATENT WROUGHT-IRON RAILWAY WHEELS.

CLECKHEATON IRONWORKS, YORKSHIRE. JOHN TAYLOR, MANUFACTURER OF ALL KINDS OF FORGINGS FOR LOCOMOTIVE, MARINE, AND OTHER ENGINES, HEAVY SHAFTING, ARM MOUNTS, AND ALL OTHER COUNTRY FORGINGS.

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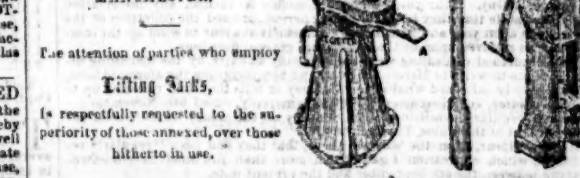
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6000	Kewick (lead), Portmeau ..	24 s. 6	1	12000	Wheal Alfred (cop.), Hayle ..	1	1s.
3000	Kilbricken (silver-lead), ..	5s.	1	240	Wheal Bel (tin), St. Just ..	6s.	6s.
1305	Kilmerhoe Wheal (cop.) ..	1s.	3	530	Wheal Belmor (tin), St. Just ..	1	1
1024	Leeds and St. Aubyn (tin, cop.) ..	6s.	6s.	1000	Wheal Carpenter (tin), Gwinnar ..	24 s. 12	12
10256	Leeds Town (tin, cop.), Crowan ..	3s.	1s.	1024	Wheal Carpenter, S. Sydenham ..	8s.	8s.
30000	Ludgvan Lease (tin), St. Ives ..	1	1	2048	Wheal Charlotte, Perranulhne ..	21 s. 167	167
5056	Lydford Consols (lead), Devon ..	1s.	1	512	Wheal Constance (lead), Newlyn ..	11	11
2500	Madron United (tin), Cornwall ..	5s.	5s.	4096	Wheal Crebor (cop.), Tavistock ..	3s.	2
1024	Melin Llyn-y-Pair, Merioneth ..	2s.	1	1024	Wheal Cupid (copper), Gwennap ..	6	4s.
256	Messer, Bodmin ..	3s.	30	720	Wheal France, near Tavistock ..	20s.	7
6400	Micell (lead), Flint ..	5s. 6d.	1	30000	Wheal Friendship ..	1	2
4000	Milington (lead, copper) ..	1	1	6000	Wheal Gwennap, Camborne ..	1	2
1024	Mil Pool (tin, cop.), St. Hilary ..	4s.	1s.	6000	Wheal Grenville, Camborne ..	1	1
7500	Mixan Great Cons. (cop.), Liske ..	1s.	2	10000	Wheal Gwuskis (tin, copper) ..	21 s.	21 s.
20000	Mizen Head, Cork ..	1	1	5120	Wheal Harriett, Camborne ..	1s.	1s.
10000	Molland (cop.), South Moulton ..	16s.	3s.	3000	Wheal Helen (tin), Breage ..	1s.	3
6400	Moslyn (lead), Flint ..	1	1	16	Wheal Hope ..	100	100
1024	Mount Plack (tin, cop.), Lelant ..	1	1	236	Wheal Kitty (tin), Uye Lelant ..	23 s. 8	8
5000	Nantoes and Penruis ..	1s.	1	5000	Wheal Kitty (tin), St. Agnes ..	4s.	1s.
1700	Nant-y-Car (cop., nr. Bhaedra) ..	7s.	1	6000	Wheal Langford ..	21 s.	21 s.
5000	North Breage, Breage ..	23 s. 10	1	512	Nant-y-Car (cop.), St. Agnes ..	5s.	5s.
1024	N. Wh. Haller (cop., Breage) ..	1s.	1s.	3400	W. Mary Great Consols (cop.) ..	5	4s.
1024	North Ding Dong (tin), Madron ..	1s.	1	5000	Wheal Marshall, St. Stephens ..	1	1
2000	North Downs (copper), Redruth ..	1s.	4	4000	Wheal Maudlin ..	2	1
2500	North Frances (cop.), Illogan ..	4s.	3	512	Wheal Montague (tin) ..	6s.	6s.
2000	North Levant (tin, cop.), St. Just ..	4	7	8000	Wheal Peru, Cornwall ..	10s. 6d.	1
21000	North Staffordshire Consols ..	1	1	4000	Wb. Robert, Sampford Spiner ..	21 s. 6	6
10000	North Towry and Cystanoe ..	4s. 6d.	1	2048	Wheal Robins (tin) Liskeard ..	23 s.	23 s.
1128	N. Wh. Robert, Sampford Spiner ..	21 s. 14	14	4000	Wheal Russell (tin), Liskeard ..	5s.	5s.
1024	N. Wh. Robert, Sampford Spiner ..	2	19 20	1000	Wheal Sidner, Plogon ..	3s.	3s.
1000	North Wheal Trevelyan ..	4 s. 4	4	952	Wheal Stanley, St. Columb ..	1	1
2048	N. Wh. Unity (cop., tin), Gwinn ..	1	1	6000	Wheal Steady (copper), Illogan ..	2s.	1s.
7980	Old Avarack & Nantoan United ..	1	1	512	Wheal Trefusis (cop.), Gwennap ..	19s.	4s.
10000	Old Trewheth Consols ..	1	1s.	3000	Wheal Trevena (tin), Breage ..	5	5s.
236	Old Wheal Basset, Illogan ..	4	5	8448	Wheal Trewana (silver-lead) ..	1s.	1s.
2500	Orsedd (lead), Flint ..	2s.	2	3167	Wheal Unity (cop., tin), Gwinn ..	2s. 9	2
10240	Pembroke & East Crinis (cop.) ..	6s.	1	1024	Wheal Uye (tin, cop.), Redruth ..	20s.	8
5000	Pemrose Consols, St. Enoc ..	21 s.	1s.	1024	Wheal Venton (sil.-lead), Liske ..	20s.	20s.
1800	Penryn (lead) ..	4	1	4096	Wheal Wrey (lead), St. Ives ..	21 s. 9	9
5000	Pendarras & St. Aubyn (tin, cop.) ..	21 s.	1	4096	Wb. Zion (cop., lead), Calstock ..	21 s. 10	10
5000	Penhale Consols (silver-lead) ..	3s.	1	6400	Whitford (lead), Flint ..	6s.	6s.
5000	Penyline Court ..	18s.	1	4096	Wood (lead), Beerferris ..	1	1s.
128	Penmaen (gold), Merioneth ..	12s.	5	100	Wydhnam Consols ..	44	44
640	Pen-y-Gell (lead), Flintshire ..	2	1	4000	Yeoland Consols (tin, copper) ..	4s.	1s.
2925	Penzance Consols ..	6	1				

MINES NOT HAVING SOLD ORES

Shares.	Paid.	Price.	Shares.	Paid.	Price.
512 Great Rough Ter	37	1	6000 Severn (lead, cop.)	5	1
1000 Great Sotbridge	1	1	21000 South Devon Consols	1	1
10000 Great Trefort	2	1	240 South Treawny	1	1
10000 Great Trevelick	2	1	3572 South-West Phoenix	13	1
10000 Havon & Henfweb	1	1	1000 South Wheel Lead	138	8d
4096 Hemerdon Consols	£1 1 6	1	4000 South Wheel Russell	11	6d
5000 Herodacombe	1	1	10000 Tallieson, Cardigan	2	1
10000 Irish Consols	£2 3 6	1	10000 Tamar Maria	1	1
1024 Ivy Tor Consols	1	1	1800 Teign Hope (Part.)	1	1
8000 Kerry (lead)	1	1	12000 Tregonoe & Fawcett	1	1
20000 Kilrinate, Donegal	3s.	1	4000 Trevellett Down	16s.	1
12000 Lady Grenville	1	1	4000 Trevellyn Consols	12s.	1
20000 Leighelton	1	1	10000 Waterford (copper)	1	1
9679 Mount's Bay Consols	2 1/2	1 1/2	1848 West Goginan, Card.	15s.	1
320 Kent Force, Alston	1	1 1/2	10 West Plains	15s.	1
5000 New Copper Bottom	1	1	256 West Sharp Top	4 1/2	1
3672 Newca Bl. Frith	1	1	12-00 West Sotbridge	1	1
1024 New Wh. Frith	nit.	1	5000 West Wheel Arthur	1	1
256 North Fowey (cop.)	1	1	6500 W. Wh. Friendship	1	1
6400 North Hingston Cons.	4s.	1	4096 Wheal Edward	3	1
128 Onakey (cop. gold)	1	1	5000 Wheal Fanny	£1 12s.	1
8000 Oola, Limerick	1	35	2048 Wh. Fanny, Ferran	£1 12s.	1
5000 Pendene Consols	1	1	512 Wheal Freedom	1	1
4000 Penmampren, Wales	1	1	1536 Wheal Gill	10	1
7484 Penquance, St. Breock	2 1/2	1	4800 Wheal Ludecott	13s.	1
6000 Perran (silver-lead)	1	1	8000 Wheal Penelope	1	1
12000 Perran Wh. Alfred	1	1	8000 Wheal Pollard	6s. 8d.	1
4000 Perran Wheal Jane	£1 3	1	5400 Wheal Prosper	1	1
10000 Pottoogro & Woodcock	1 1/2	1	10000 Wheal Surprise	1	1
2048 Pridgenard, Cardigan	2 1/2	1	1024 Wheal Trefusack	6 1/2	1
10000 Priggenard Consols	1	1	2000 Wheal Tristram	3	1
10000 Rathell Down	1	1	5000 Wheal Victoria	1 1/2	1
8000 Red Dragon, Wales	1	1	5000 Willow Bank (lead)	11s.	1
240 Retallack United	1	1	8000 Winstler (lead)	1	1
10000 Rhedol United Mine	£1 4	1	64 Ye. Obaford, Dev.	5	1
4000 Rittion Cattle (lead)	16s.	1	10000 Yorkshire Min. Co.	1	1
100000 Royal Hibernian	1	1			

Transactions on the Stock Exchange.

Transactions on the Stock Exchange.											
Shares.	Paid.	Clos.	Pr.	Bus.	Done.	Shares.	Paid.	Clos.	Pr.	Bus.	Done.
1000000 Agua Fria	1	...	1	...	...	72000 Grand Duchy of Baden	1	...	1	...	...
30000 Anglo-Australian Gold	1	...	...	...	...	60000 Liberty	1	...	...	...	...
100000 Anglo-Californian	1	...	...	...	...	10000 Lusitanian (of Portugal)	1	...	1 1/2	...	...
20000 Australian	6	...	...	...	1 1/2	100000 Mariquita	1	...	...	...	...
60000 Australian Cordillera	1	...	...	...	...	3000 Mexican and South Amer.	9	...	...	...	...
100000 Australian Freehold	1	...	...	...	...	10000 New Granada	1	...	...	...	...
50000 Ave Maria	1	...	...	...	...	200000 Nouveau Monde	1	...	...	...	...
21000 Caracora Creek	1	...	...	...	...	10000 Potosi and Silver-lead	30	...	15	...	...
100000 Colonial Gold	1	...	...	...	...	100000 Port Phillip	1	...	...	...	...
530000 Copper Miners of England. Stock .....	...	...	50	33	...	60000 Quarts Rock	1	...	...	...	...
8000 Ditto, Pref., 7 1/2 per cent. 25 .....	...	...	26	28	...	50000 South Australian	1	...	1 1/2	...	1 1/2
70000 English and Australian Gold	5	...	1 1/2	1 1/2	1 1/2	70000 Waller	1	...	...	...	...
25000 Fortuna	1	...	1 1/2	100000 West Mariposa	1
100000 Great Nugget Vein	1	...	1 1/2						

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